WIN £500 of First Steps software. See page **58**

NEW COMPUTER EXPRESS

FIRST NEWS • FIRST REVIEWS • BEST BUYS • YOUR WEEKLY GUIDE

THIS WEEK

AMIGA
A genlock for under £150, and it's available in the UK

ATARI
Revealed: the latest music software for the ST

PC
100Mb of data on a one inch disk **PLUS** a 386 for £900

MACINTOSH
The first Macintosh clones are on the horizon

GAMES
Chuck Rock reviewed **PLUS** Tips for *Car-Vup* and more!

PLUS
REGULAR COLUMNS ON **PROGRAMMING PD SOFTWARE TECH TIPS ELECTRONICS** & 36 PAGES OF **SHOPPING EXPRESS BARGAINS !!!**

RIP-OFF

THE GREAT *DOOR TO DOOR* DEBACLE

Now the full story can be told

DOOR TO DOOR EXPRESS INVESTIGATES

- 'Missing' money ● Unpaid bills
- Dismal program ● Furious customers
- And the man who disappeared without trace

Pages 6, 7, 8 & 52

The Pitch   **The Product**   **The Place**   **The People**

FUTURE COMPUTERS:
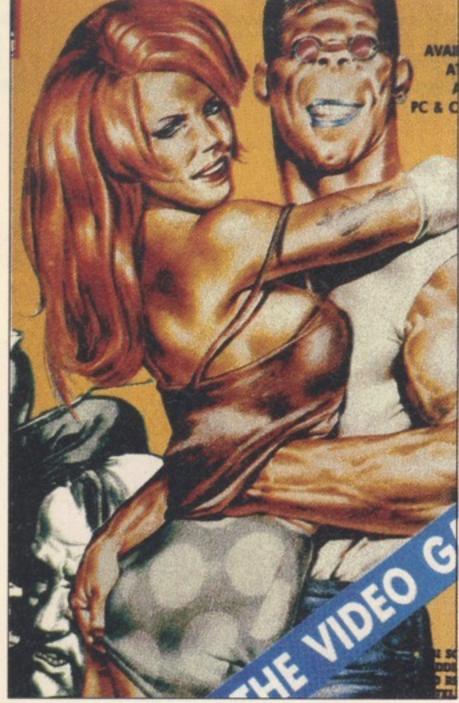Is your keyboard obsolete? New input devices on test. Page 54

AMIGA 1500
Commodore's redesigned A2000 put through its paces. Page 10

future PUBLISHING
Your guarantee of value

frontend
edited by Colin Campbell

SOFTWARE SEX ADS RUMPUS

The use of cheap sexual imagery for the promotion of computer software has once again incurred the wrath of the influential Advertising Standards Authority.

In its latest monthly report, the ASA details two advertisements for computer software which have caused offence to members of the public. French games publisher Ubisoft and London based business software house Morse Computers have been ticked off for ads which had prompted protest from readers.

The Ubisoft ad appeared in various computer games magazines late last year promoting the title *Ranx*. Headed 'Your mother wouldn't like it' the page featured a cartoon illustration of a man and a woman in an embrace, the man fondling the woman's buttocks. The complainants considered this to be offensive especially since the target audience is predominantly teenagers.

Ubisoft has apologised for causing offence but added that the ad was meant to be "saucy" rather than indecent. The illustration had been culled from the cover of an American cult magazine on which the game was based. The ASA stated that Ubisoft would be "well advised to reconsider its use" in future advertising campaigns.

Campaigns targeting juveniles aren't the only ones to cause offense. Morse Computers was also hauled up for its ad in *The Independent* stating: "My Electronic Secretary likes to sit on my knee." The text was accompanied by a graph with its lines depicting the outline of a naked woman on her back.

Morse claimed that the ad was "tongue in cheek" but admitted that he thought it could be seen as offensive. The ASA concluded that the ad conveyed "unnecessary innuendo" and requested Morse not to run the campaign again.

Other companies pointed out for sexist advertising in the past include highly respected business software publisher Sage and top games producer US Gold. ■

Oh Brother – Titus ties up Blues boys

A computer game based on mega-successful musical movie *The Blues Brothers* is set to take centre stage later this year.

French company Titus splashed out on the big-name licence, and is expected to cash in by launching on all available formats. The game will stick closely to the plot of the 1980 movie with plenty of action sequences and car chases.

The film cost $33 million to make (mainly spent on wasted automobiles), and although stars Dan Akroyd and John Belushi failed to attract cinema goers of the day, the flick built up a phenomenal following throughout the video boom.

A spokesman for Titus said: "*The Blues Brothers* is a hugely popular licence and it is known around the world. I don't know of anyone who hasn't heard of it and I'm sure it will have retained its appeal." ■
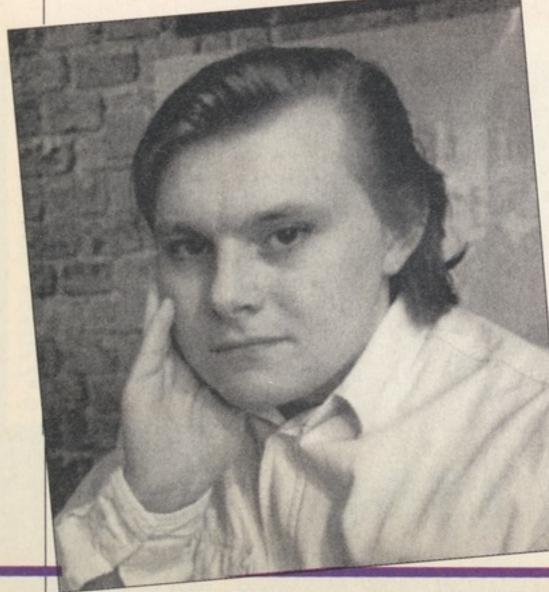
Compatible communication

Six of the world's top computer companies have teamed up to produce an electronic messaging software standard which will allow incompatible computer systems to communicate with each other.

The Open Document Architecture Consortium (ODAC) wants to develop a software toolkit which will allow users to transmit entire documents between differing computer standards. In this way not only text, but also images can be passed between computers without the need for reformatting or re-typing.

The big names involved are ICL, IBM, Bull, Dec, Unisys and Siemens Nixdorf, who reckon their plans will come to fruition by 1993. ■

'Mad hacker's' bid to start a new life

The Mad Hacker was released from prison two weeks ago and came out with a defiant message for the authorities. He is planning to fight to clear his name.

Nicholas Whiteley was the first person in Britain to be jailed for computer hacking after he had broken into a university computer network and caused criminal damage to data on the system. During the 1988 break-in he had left messages proclaiming that the "Mad Hacker" had made his mark.

Despite serving a two month sentence he still protests that he has broken no laws, arguing that it is impossible to damage something as intangible as computer data. In an attempt to resurrect his shattered career he plans to make an appeal to the House of Lords. However, he admits that his chances of even being granted a hearing are slim.

"But," he adds, "I have no choice. Just because I have done my prison sentence it does not make the decision any more just. They have thrown everything at me. They've dragged me through the courts, they have shut me behind bars and they've screwed up my career. I cannot start my life again until I have cleared my name."

Whiteley, 22, must go back to the Criminal Appeal Court to plead his case, but that court has already rejected his arguments (*Express* 118). If the court is satisfied that the law has been followed properly, Whiteley's cause will be lost. ■

IBM chiefs stack up their salaries

IBM's top brass have much to worry about in these dark and troubled times. It seems that a recent decision to axe 14,000 jobs caused Big Blue chiefs so much trauma that they have awarded themselves fat new pay packages to help them get over it.

Company chairman John Akers' salary has been increased to $2.6 million a year – up a not unimpressive 35 per cent on his 1989 rate. President Jack Kueler has received a 36 per cent boost; his wage packet is now stuffed with $1.6 million. And senior vice president Frank Metz has been rewarded a 43 per cent rise, now totalling $1.6 million.

IBM points out that senior staff pay is linked to company performance. Increases were in line with 1990's financial returns when earnings per share were up 16 per cent.

However, the company admits that performances will not be so hot this year. Profits for the first quarter of 1990 are expected to be half those of the same period last year. ■
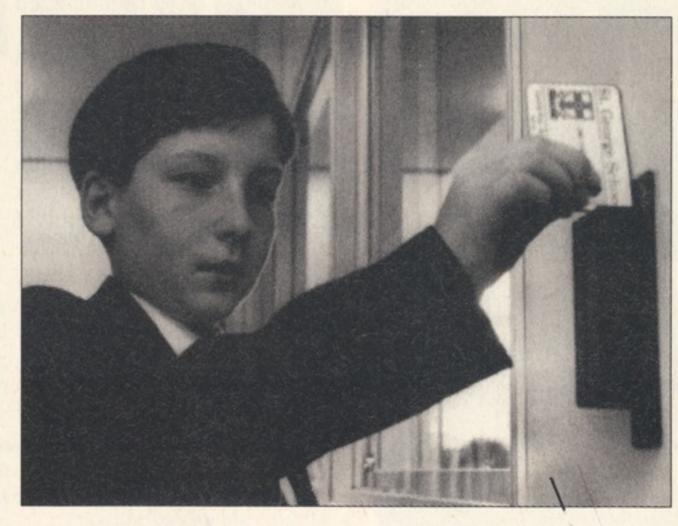
COMPUTER CATCHES OUT SCHOOLKIDS' TRUANCY

Computer smart cards have been issued to a class of 14-year-old schoolboys in an attempt to keep a check on the movements of the pupils.

A third-year class at St George's Boys School in Southampton has been using the computer register system since last week. It has proved to be so successful that the scheme is to be used in more classes.

Instead of calling a register at the beginning of each class, the boys simply run their cards through one of 42 reader points situated around the school. The computer then records the whereabouts of the boys at any time of the day, and notes which lads are missing. Missing boys are tracked down and dealt with in a more traditional fashion.

David Caswell, headmaster of the 500-pupil secondary school, persuaded the governors to spend £10,000 on the Offcom Data Student Register System. He estimates that the school will recoup £11,000 worth of extra teaching time within one year.

"We'll be saving 20 minutes at the start of each day which will be spent on English and reading instead. That amounts to approximately 138 teacher days in a full year. However, truancy at St George's is not particularly a problem we have to deal with."
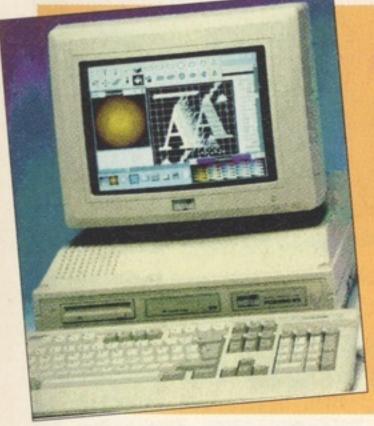
He says the system – which is based around a Tandon IBM compatible PC – is technically flawless and that it gave boys "a lot more freedom to move around the school".

Thirteen-year-old pupil Philip Le Cheminant had no complaints after his first day: "We all think it's a good idea, and other classes are looking forward to getting the cards," he said. Pupils who mislay their smart cards must cough up £3 for a replacement.

Scott Hopkins of Dundee based Offcom agreed that the system could help control the growing truancy problem in Britain's schools. He told Express: "If a pupil is not at school the teachers know straight away, and they can deal with it very quickly." ■

Crown's golden offer

Looking for a cheap 386? Saving frantically for a laser printer? Then check out Crown Computer Product's latest offer.

The Lancashire mail order outfit is selling Amstrad 386 PCs for £899, and buyers will be offered a six page per minute laser for £499.

Amstrad's 2386 which normally retails at £1,999 includes a mono monitor and features a 20MHz processor with a 65Mb hard disk. The Dataproducts LZR 650 laser would normally set you back £1,345.

Find out more by calling Crown on 0704 895815. ■

On the ball Rovers help programmer

Blackburn Rovers Football Club have come to the rescue of a new soccer computer game, after thieves broke into the home of the developer and stole his computer.

Greg Sibley, 33, had been working from home on a new game based on the English Football League. But his project looked to be doomed after burglars broke in and made away with his Amstrad PC1512.

Sibley visited local businesses in an appeal for help, and was finally rewarded by generous Rovers. He is being allowed to use one of the Second Division team's PCs for the next six months.

The joyful games developer enthused: "I knew I'd find a sponsor one day. The game is going to be a classic and I see this as positive action by Rovers. At the moment I'm dealing with the shock of finding help, especially from my local football team."

Blackburn Rovers' commercial manager Ken Beamish said: "We 're pleased to help. There's the connection with football and Greg is a local man. He's welcome to use our computers."

Sibley's as yet unnamed game features all the teams in the football league, with the player having to work his way up from the bottom of the Fourth Division. ■

Minute drives on the way

One inch 100Mb hard drives for notebook PCs look set for a mid 90s launch, while 1.8-inch hard drives could be here as early as next year.

Insiders at Hewlett Packard claim the company is already developing the technology, while according to analysts in the US, IBM is also working on a 1-inch drive.

A committee of manufacturers has already been set up to define the standard for 1.8-inch drives. But it appears the industry has already turned its attentions to the 1-inch drives. Many manufacturers are not so excited – they feel that if research into flash card technology and optical drives proves successful, it could make hard drives obsolete. ■
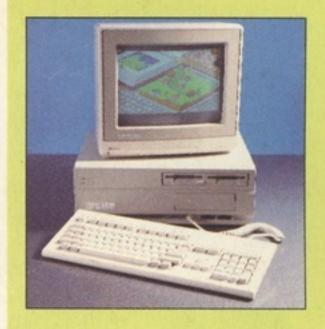

CONTENTS

Stick to your guns

Banging away on a joystick for hours on end can be extremely painful pastime if you haven't bought the right kit, so manufacturers are as keen as ever to stress the comfort value of their creations.

Logic 3, never a company to shy away from publicity, reckons its latest offering, the Manta-Ray, is "the most comfortable joystick known to man". Boss Ashvin Patel said: "In total, several million hand-held joysticks have been sold throughout the world. Thus there is a great deal of information about the perfect ergonomic shape to give maximum comfort. The Manta-Ray is the product of a considerable amount of data".

The standard model costs £12.99, the auto-fire £14.99, while Sega and Nintendo versions retail at £16.99. Phone 081-900 0024. ■

• Manta-Ray: cutting down on the pain

Sega has holographic sights

A coin-op video game utilising holographic visual technology is to be launched by Sega later this year.

The company isn't prepared to talk about its newest marvel just yet, but it will be shown at the forthcoming American Coin Machine Exposition (ACME) in Las Vegas. Despite being a Japanese firm, Sega has relied on work undertaken in US universities over the past three years, and the new technology is understood to have been scooped from an American company.

Sega has been working on all manner of weird and wonderful contraptions including a Megadrive compatible IBM PC, due to be launched in the US any time now, and a 32-bit super games console for the home.

Holographic imagery is normally associated with science fiction films rather than video game arcades. A hologram is a two dimensional image which appears to have depth, and so any such arcade machine would give gamers a three dimensional environment. Skillful programmers could even make images appear to come out of the screen. More details as they emerge... ■

Dixons puts the odds on computers

Leading retail chain Dixons last week surprised the PC market by announcing it would be extending its chain of Business Centres.

The company is gambling on an increase in demand for low to medium priced business machines, peripherals and software, despite warnings that buyers are tightening their purse strings due to the recession.

Dixons is best known for selling everything from cameras and Walkmans to Hi-fis and TV sets, but computers have been figuring in the firm's plans more and more in recent years. The Business Centres can normally be found in the corner of larger stores such as Debenhams. They claim to help first-time buyers make the right choice.

Over the past few years Dixons has been closely associated with Amstrad, and, like the Brentwood manufacturer, has proved to be popular among small business buyers.

Dixons has increased the number of Business Centres by 30 per cent in the last 12 months with 114 currently up and running. Group commercial director Rupert Gavin reckons that figure could be closer to 160 by the end of this year.

Gavin admitted that selling PCs to first time users is not an easy job. "We have had a learning curve," he said. "At first we didn't get the software right. Now we match up computers, printers and software to supply packages for specific uses, whether that be for financial spreadsheets, word processing or for desktop publishing."
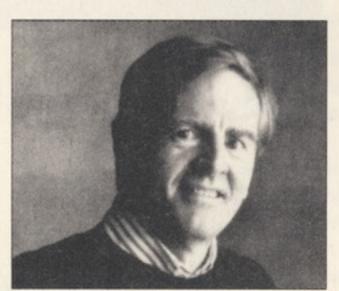
He also predicted that the chain could be making radical price reductions before Autumn this year. ■

Is Apple about to reveal its technical secrets?

SEND IN THE CLONES

Apple has hinted that it may be ready to license out its prized Macintosh operating system to third parties, thus allowing companies to produce Macintosh clones.

Apple chairman John Sculley told assembled journalists at the first MacWorld event in Tokyo that he is "discussing" shar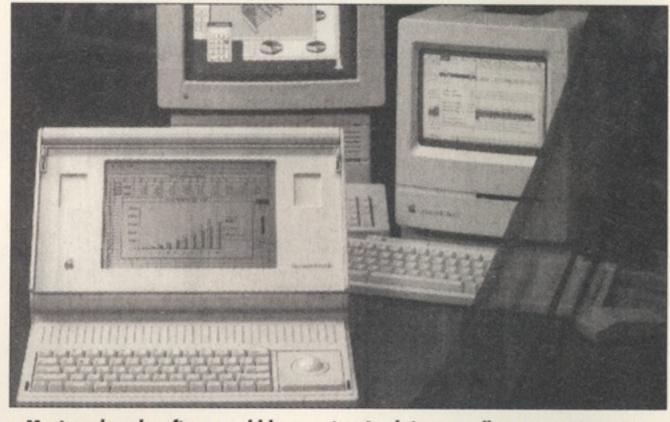ing the company's jealously guarded technical secrets. If so, independent manufacturers could build their own Macintosh compatible machines in the same way that companies currently build IBM compatibles.

On his return to the United States, Sculley told the Software Publishers Association that Apple would be aiming to make the Macintosh an industry standard. "I'm talking about an open system that doesn't penalise the user in terms of hardware," he commented.

Officials at Apple have been keen to play down the significance of Sculley's remarks. A spokesman pointed out that the company "has never announced any plans to license the Macintosh operating system".

Even so, the Japanese left Tokyo MacWorld with no doubts as to Sculley's intentions. The

• Apple chairman, John Sculley — aiming to make the Mac an industry machine.

• Macintosh: other firms could be copying Apple's marvellous operating system.

Nippon Kogo daily newspaper reported: "Apple considers opening up the Macintosh as its top priority issue. As part of the scheme, Apple wants to share its technology with the industry."

Sculley's hints follow the announcement by Californian company NuTek Computers that it has managed to clone the Macintosh without breaking any of Apple's notoriously stringent copyrights (Express 121).

NuTek is confident that it has foiled Apple's lawyers, and this may have prompted Apple to take third party licensing into its own hands.

If Apple does strike up deals with third party manufacturers, then buyers can expect to be offered Mac compatibles at extremely competitive prices.

In his latest round of conference and show hopping, Sculley also revealed that the company would be launching more High Street orientated Macs in the same vein as the Classic. This is in addition to the long awaited Mac notebooks and the RISC based Mac. ■

Carry-I OK for tiny 386

It's not a portable, but it is simple to move around. That's the verdict on Lotay's forthcoming small footprint PC. The company is planning to launch a 36SX version of its Carry-I PC at next month's Which Computer? Show next week, boasting a low price tag of £1,399.

Carry-I 386SX will run at 16MHz and will come with 2Mb of RAM on board with a 40Mb hard disk and mono monitor. In comparison, Amstrad's recently launched small footprint 386SX PC retails at £1,495.

Lotay also reckons it is the smallest IBM compatible desktop PC around; it measures 29.7cm x 15.2cm x 3cm. The machine also comes with a one year warranty. Call 081-963 1919. ■

• Carry-I 386: size is important.

Look into Windows

An introduction and training video for new users of Microsoft's Windows 3 environment has been launched.

Windows 3 on Display teaches users everything involved in making the most of Windows applications and, according to publisher Comput-Ed it is: "Easy to watch, with a touch of humour. Screen shots are rock steady and the frequent use of close-ups and examples makes it easy to see what is actually happening."

Windows 3 on Display will set you back £39 plus £2 p&p. Call 0626 866247. ■

Did Kid Icarus ruin a teenage girl's health?

NINTENDO BLAMED FOR EPILEPSY FIT

Nintendo US is being sued by the parents of a 15-year-old girl who suffered an epileptic seizure while playing *Kid Icarus*.

Lawyers for the Michigan family claim to have documents from the girl's doctor which prove that the attack was caused by playing the game. The lawyers say that before the attack she was perfectly healthy, but will now probably have to stay on medication for the rest of her life.

Nintendo has not yet made an official statement concerning the case, but a spokeswoman told *Express* that the company is treating it as a case of photo-sensitive epilepsy. This is a condition which in the past has been connected with sustained television watching or intensive work with computer monitors.

"It is not a problem particularly linked with video game playing," said the spokeswoman, "likely sufferers should monitor their game playing carefully."

Nintendo has captured a massive 80 per cent of the video game market in the US and 35 per cent of American homes own a Nintendo Entertainment Sys-

tem. This is believed to be the first case of photo-sensitive epilepsy to be induced by a video game, but Nintendo denies that it is being complacent.

"Nintendo is very concerned about the effects of its games on consumers," we were told.

Lawyers for the girl, who as a minor cannot be named, are vowing that, "you're going to see a lot more of this."

MASSIVE REFUND

Meanwhile, Nintendo has agreed to re-imburse its US customers with up to $25 million (£14 million) worth of vouchers rather than face a federal trial over its alleged price fixing .

The suit, which was brought against the company by the Federal Trade Commission (FTC) and more than 30 States, charges Nintendo with artificially maintaining the price of the Nintendo Entertainment System (NES) at $99.99 by threatening to slow down or cut off supplies to retailers selling it for less.

To prevent a long and complicated trial Nintendo and the FTC have reached a settlement whereby anyone who bought an NES between June 1988 and

• *NES: video game playing could damage your health, but Nintendo has not yet made an official statement.*

December 1990 in any of the states involved in the suit can claim a $5 "instant redemption certificate" from Nintendo. The company has also agreed to pay the states $4.75 million towards the cost of administrating the refunding program.

New York's Attorney General, Robert Abrams, accused Nintendo of wanting to: "Extract every last ounce of profit".

However, Nintendo has not admitted to the allegations. Howard Lincoln, Nintendo's vice president, claims the company has agreed to the settlement because: "Quite frankly we were concerned with how Nintendo game players might view these allegations. We opted to get this behind the company immediately and in a manner that provides real value to our consumers." ■

E = MC²
– maybe

Einstein was wrong according to a supercomputer at Cornell University in the US.

The computer has been used to simulate gravitational collapse and has produced results which refute the famous scientist's theory of relativity.

Based on the theory of relativity, the simulation shows what will happen if a huge cloud of particles shaped like a rugby ball collapsed in on itself. The result is thin needles of infinite density and gravitational force at its pointed ends, called "naked singularities".

According to our present knowledge of the universe these points do not exist, so the researchers reckon that the theories of relativity must be incorrect.

"If the theory says they exist, something is wrong with the theory," concluded co-project developer Stuart Shapiro. The project has taken three years to develop and a typical simulation can take almost a day. ■

• *Hewson: yesterday's manager becomes 21st Century man.*

Hewson returns

Veteran games software house Hewson re-emerged from the pit of adminstrative receivership under a new name last week.
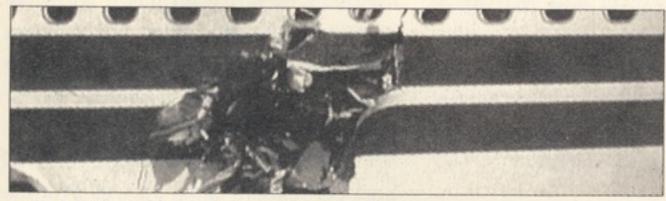
As reported in *Express* 124, the official receiver "hoped someone would step in and buy the firm as a going concern".

Nextgrand, trading under the name 21st Century Entertainment has done just this. Not only does this put one of Britain's best known publishers back on the scene, it also returns industry veteran Andrew Hewson as director of a software house.

According to 21st Century, the new firm "is financed by local businesses with interests ranging from computers to car distribution and property development". The plan is to consolidate Hewson's tried and tested markets here and abroad.

What this means in terms of new developments and the first game release has yet to be seen, as is the position of Hewson's creditors. ■

Air crashes on CD

• *CD-ROMS could now help avoid future disasters.*

Details of air crashes and other in-flight disasters culled from US Federal Aviation Administration computers are being released on two CD-ROM disks.

The Service Difficulty Report (SDR) Disk and the Accident Incident Data disk are being released for both Macintosh and MS-DOS systems by Flightline Electronic Publishing later this month. They have been compiled from files which date back to 1970 and cover all information on American commercial flights.

An SDR includes such occur-

rences as in-flight engine failure while events on the Accident disk are those which either resulted in over $10,000 worth of damage or human injury. The CDs will feature official and technical reports on such notorious disasters as Locherbie and Colorado.

The disks cost $395 for a single copy or $1,295 for an annual subscription of four updates. The company also publishes CD-ROM disks of the American Aviation Compendium and the Federal Aviation Regulations/Airman Information Manual. Tel 0101 215-993-8117. ■

Facing up to the past

If you think this guy looks bad now, you should have seen him five years ago. Then he was a little more than a cracked skull buried beneath seven feet of accumilated muck. For this is the reconstruction of a Viking man who died a thousand years ago. The remains of his skull were analysed by a computer, which stretched a new face over the brittle bone.

'Eymund' was a fisherman living in the York area who died a thousand years ago, aged about 30. His remains were dragged out of the mud five years ago, when the project to rebuild him began.

The skull was first laser scanned at University College Hospital in London with equipment normally used for facial surgery. A laser beam measured the skull while its contours were recorded by a video camera connected to a powerful mainframe computer. A computer controlled milling machine then cut out a 3D head before the artificial skin was stretched over. Dr Peter Addyman, Archaeological Trust director commented: "Eymund is unnervingly real. It's staggering to meet a thousand-year-old face like this. Computers have made it authentic." ■

● You can see Eymund at York Archaeological Trust, 1 Pavement, York.

THE STRANGE TALE OF THE UNIVERS
PLANNING PACKAGE AND THE £20,0

Two months ago, advertisements began to appear in the computer press for a route planning program for the PC and Commodore Amiga. According to these advertisements the product, *Door to Door*, offered a host of innovative facilities for £19.95 – including ('For a limited period') digitised street maps of inner London. A monthly schedule of add-on modules for the package was outlined, priced at a modest £10 each.

In a telephone conversation with *Express* staffer Keith Pomfret, John Gold – the man who booked those advertising pages for Geographic – claimed that *Door to*

Door would outshine all its rivals. But the reality was different.

Today, the telephone number given on the Geographic advertisements has been discontinued. The advertising bills have not been paid. Hundreds of Geographic's customers have been left disgruntled, or out of pocket. And no-one we contacted would or could tell us where John Gold is now.

The full story behind Geographic and *Door to Door* is remarkably complex. As *Express* started to investigate, a tangled web of incompetence, naiveté, confusion and mis-representation began to unravel...

A s we revealed in *Express* 127, *Door to Door* only outshone its rivals in its inability to live up the claims made for it. Soon after the first advertisement appeared in the pages of *Express*, readers began telephoning and writing to our offices expressing their dismay at the quality of the product.

They were unhappy about the dismal performance of the Geographic software, incensed at the lack of documentation and annoyed that the digitised maps of inner London were not supplied as the advertising copy had promised. Our readers were unanimous – *Door to Door* was rubbish.

In conversations with Keith Pomfret, our technical editor, John Gold had claimed that *Door to Door* was much better than all its rivals. A review copy would be sent, and we 'would be impressed' he asserted. This was the first promise that John Gold reneged on – a review copy never materialised. In the end, for the review in *Express* 127 we used a copy of the program that one

of our readers, Michael Bromley, lent us – when we telephoned to ask if he wanted it back, Michael told us to keep it: "It's no use to me," he exclaimed!

While it seems that the majority of Geographic's customers at least received something, others weren't so lucky. Their cheques were cashed and nothing was sent in return. Others returned the product asking for a refund – and a few were successful. But then the telephone number quoted in the advertisement was discontinued, and post sent to Geographic at 'Dept of Transport Studies, 3/5 Cranford Place, Wilsden' was no longer accepted.

Something was going wrong.

Early in March, the *Express* advertising department received what appeared to be a circular letter from Geographic to the magazines in which it had booked advertising space. 'Ex 5/6 Cranford Place, West Yorkshire' appeared as the address (rather than 3/5 Cranford Place as on the adverts) and although the letter was not signed by

hand, the name 'John Gold' was typed at the foot of the page. This is what it said:

Due to the appalling manners of a few of those readers who responded to our advert in your magazine, we have been obliged to change the telephone number and address on our future advertising.

We were permitted to use this private address until we had established

> ## "In my opinion, *Door to Door* is quite the worst piece of software I have ever come across in my life."

ourselves. We have been told this cannot continue, primarily due to the above mentioned matter.

Could you please note that as of now we are not accepting any further orders until we have arranged new premises. We will inform you when this happens. Please stop all advertising as of 9/3/91.

That was five weeks ago. Apparently because a few people were rude on the telephone, John Gold and Geographic have effectively disappeared – he has still not advised *Express* (or, it would appear, any of the other magazines in which he took advertising space) of his current whereabouts. Nor has he paid his advertising bills – liabilities which amount to at least £7,500.

Nor has he taken any action to explain to new or existing customers why post is no longer being accepted at the original address. If you purchased a copy of *Door to Door*, and want to complain or ask for a refund there is currently no point in writing to Geographic at Cranford Place. Your letter will simply be returned by the Post Office – it does not

have a forwarding address, and the people at 3/5 (or even 5/6 Cranford Place) are not accepting mail for Geographic.

ROAD TO RUIN

In its advertising, Geographic described *Door to Door* as a route finder and route planner that would 'plan your journey from door to door'. The firm claimed that the program would take you through inner city streets, and tempted buyers with the promise of regular monthly updates including European databases, graphics, animation and sound, a world atlas, history of Great Britain, and 'mysteries of the world'. 'New or special routes are easy to add yourself with the on-screen help', the advertising copy gushed.

The program that Geographic sent out bore almost no resemblance to the claims in the flashy advertising. It offered a simple text-only display that suggested routes so badly flawed that if you were daft enough to follow one to the letter, you'd more than likely end up taking a journey that involved travelling two or three times the necessary distance.

The litany of complaints we received from our readers came from all over the country. Our correspondents were unanimous in their condemnation of *Door to Door* – so far, we haven't received a single letter of praise for the product, despite asking people in the letters page (*Express* 125) to tell us if they liked it. Here's a sample from our files:

Mr D Nisbet of Dublin: "The routes it suggested took twice as long as necessary." P Harvey: "The free digitised street maps have still not arrived." Michael Bromley, who supplied us a copy for review told us: "I will be very interested in your opinion of this package but remember, it feels worse when you have paid for it." Geoff Cope from Cornwall: "The program did very little to justify the claims listed in the advert," he said. Thomas Hammond from Devon: "I have

• Geographic's unwitting bankers
We contacted the branch of Midland Bank that held the account through which it appears most, if not all, of the cheques payable to Geographic were cleared. A spokesman explained that if nothing is untoward in an account, the bank has no reason to examine it – and attention is only drawn to an account when unusually large lump sums move in or out of it.

R'SITY DOCTOR, THE ROUTE
0,000 SOFTWARE STING...

sent it back for a refund under the Sale of Goods Act." Robert Whitrow in West Glamorgan got nothing at all: "My cheque was cashed on February 20 and I haven't received the software," he complained, the last time we spoke to him – on 7th April – he still hadn't received anything from Geographic.

"I too have been seemingly conned by this company," said PL Croud of Southend. Mr K Roper from Suffolk wished us well in our hunt: "I hope you have more success in your attempts to contact Geographic than I did," he wrote.

Marios Charalambides from London wrote: "The product would cause great disappointment had it been purchased from a PD library." Another Londoner, L Poullos, pointed out that: "It fails to recognise towns and I haven't received the digitised maps".

Malcolm Allsop of Anglia Television summed up the general feeling: "In my opinion it is quite the worst piece of software I have ever come across in my life," he said. While Brian Hogwood wouldn't have accepted it as a gift: "It is not worth giving away free," he told us.

THE TRAIL HOTS UP

By now, if you dialled the phone number for Geographic given in the adverts, all you got was the 'unobtainable' tone. Call the operator, and Telecom would confirm that the number was a spare line.

Some readers travelled to the address given in the advertisements, only to be told that Geographic had moved away. One reader told us in a letter: "I went and knocked on the door, and what I thought was a very nervous young lady answered. She hardly opened the door. When I asked about Geographic she told me very nervously that they had moved to bigger premises and had a new phone number ... she

said that if I contacted the magazine 'Computer Express' they would give me the **new** telephone number".

Who was this woman, we wondered. And what had given her the idea that *Express* would have the new telephone number for Geographic?

So *Express* decided to send Keith Pomfret on the trail of the elusive John Gold and Geographic. We wanted to know:

● **How could Geographic make such outrageous claims for such an obviously flawed product?**
● **Why had the phone number and address been changed without adequate warning?**
● **Where was John Gold and was Geographic still trading?**
● **What had become of all the cheques for £19.95 – was there any chance of disgruntled customers receiving a refund?**

Around the time he was placing orders for advertising space, John Gold told Keith Pomfret that *Door to Door* was "a revolutionary product at a price people can afford," adding: "It's been developed in the Department of Transport Studies by a Doctor Watson and her team." Despite clearly implying that an academic department had been involved in the creation of *Door to Door*, Gold refused to reveal the whereabouts of his programming team, or allow us to talk to any of them.

But how to find Dr Watson? Elementary – if she existed, a programme of telephone calls to universities and polytechnics across the country would reveal the whereabouts of John Gold's developer. This was the best lead we had... until one of our readers located Dr Susan Watson by asking his bank to

Picture by Ian Potts

● *The so-called 'Dept Transport Studies' which Geographic used at its base. In reality, a modest terraced house in Cranford Place, Wilsden, West Yorkshire.*

find out who had cashed his cheque for £19.95 made out to 'Geographic'.

THE GOOD DOCTOR

Our reader was told by his bank that the cheque had been paid into the account bearing the name of Miss S. M. Watson, and that the transaction had taken place at the University Branch of Midland Bank in Leeds.

A call to Leeds University confirmed that a Dr Watson was on the staff of the Institute of Transport Studies. *Express* contacted Dr Susan Watson at the Institute and asked her about *Door to Door* and Geographic. She claimed that she had never heard of Geographic or of *Door to Door*.

She insisted that she had no connection with Geographic and when she was told that we wished to speak to her head of department, she at first refused to give us his name. The conversation ended there.

Dialling the university switchboard put us in contact with Professor May,

head of the Institute of Transport Studies who said that he had nothing to do with the matter, and that it had nothing to do with the Institute.

Professor May wrote immediately to *Express* confirming that there was no official involvement between the Institute and Geographic. He also informed us that, as he was about to go abroad, he was putting the matter in the hands of his colleagues, Professor Nash and Mr Howard Kirby. So we spoke to them,

Dr Watson claimed that she had never heard of Geographic or *Door to Door*

explaining the sorry tale of *Door to Door* and Geographic as we saw it. We pointed out that there would appear to be several clear links between the program, the company promoting it, and Dr Susan Watson.

Kirkby then spoke to Dr Watson who apparently confirmed to him that she had been involved with Geographic in a "minor" capacity.

So Dr Susan Watson had changed her story... She agreed to talk to *Express* again. She telephoned Keith Pomfret, and was clearly in an emotional state. She explained that:

● She was not a programmer and only did administrative work for Mr Gold at Geographic, typing replies to letters and so on.
● He had originally contacted her 'out of the blue'. "This happens all the time," she added. "I've had other people in touch with me about doing bits of work".
● That "probably about five

ON THE TRAIL OF THE MISSING DIGITAL DATA FILES

In the PC version of *Door to Door*, the absence of the digitised maps was explained in a Read.me file, which told the purchaser:

DUE TO ORDNANCE SURVEY COPYRIGHT, THE LONDON DIGITISED MAPS THAT ARE GIVEN FREE WILL BE DELAYED FOR A SHORT WHILE AND THEN SENT ON TO YOU.

Was Geographic the innocent victim of slow-grinding bureaucracy? Was John Gold forced to break his promise to customers and send out an incomplete product as a result of factors outside his control?

We contacted Ordnance Survey Copyright Manager Robin Knights who told us: "We've seen their advertising and we're trying to contact them too. They haven't, to my knowledge, been in touch to try and licence the digitised map data from us."

Knights explained that in order to use Ordnance Survey digital data, a company has to apply for a licence stating the purpose, the area covered and whether data needed for an in-house or end-user product. A one-off 'mastering' fee must be paid for each area used, and a further fee paid for each licensed package sold. In turn, the end-user must also register – the company publishing the product is obliged to pass a register of customers to Ordnance Survey.

According to the records to which Robin Knights has access, Geographic neither contacted nor tried to contact Ordnance Survey about digital mapping. The only trace of Geographic (Dept Transport Studies) that Knights could find in the files is a copy of a letter the Ordnance Survey Copyright Department sent to Geographic. In common with a lot of other people, they have yet to receive a reply...

people were involved" - but that she had never really met them. Apparently "they could be in trouble with their jobs - for doing extra work - it was confidential".
● She had recently lost contact with John Gold.

She continued: "I feel as if I've been thrown to the flipping sharks. He's gone and I've no way of getting in touch with him. I hadn't met the man before. All I

... we didn't realise it at the time, but John Gold was speaking to us from Dr Susan Watson's home telephone.

did was look at the program and offer advice, but I'm not a programmer".

Then we asked Dr Watson to put a 'ball park figure' on the value of Geographic cheques she had processed through her account. She replied: "Perhaps £10,000... I don't know".

She went on to describe the mysterious Mr Gold: "He's between 40 and 55 years old, about six feet tall, of average build, with a receding hairline, European in appearance and well dressed." She added that he drove a large silver or blue saloon car, he didn't wear glasses and he was clean shaven.

We asked Dr Susan Watson if she would give us her new, ex-directory telephone number in case we wished to contact her again to clarify any points, but she refused.

LETTER FROM THE INSTITUTE
We then received a letter from Howard Kirby, the assistant director of research at Leeds University's Institute for Transport Studies. He was at pains to point out that: 'the Institute has had no

involvement with the *Door to Door* software; neither has it had any knowledge of or direct dealings with the organisation advertising that product, or with the person named by you as Mr Gold.'

The letter also stressed that Dr Watson had made it clear to Mr Gold that she was acting in her own time, that the Institute was not involved and that her involvement was limited to providing some administrative assistance and technical advice.

John Gold told us a different story when he was still in contact with *Express* - we didn't realise it at the time, but he was speaking to us from Dr Watson's home telephone. He told us that the software had been developed by 'Dr Watson and her team'.

Kirby's letter asserted that Dr Watson's association with Geographic 'was whilst she was not employed by the Institute/University' – but also stated that she has been employed by the Institute since January this year.

Kirby is clearly mistaken in this belief. Dr Watson has been associated quite closely with Geographic since January this year – on at least three counts:

1) By her own admission, Dr Susan Watson had processed cheques on behalf of Geographic since January – the first ads for *Door to Door* appeared in February.
2) When John Gold placed some £4,500 worth of advertising with Future Publishing magazines he used Dr Susan Watson's home telephone number at the Cranford Place address to receive calls from advertising sales people. It also seems likely that he made the bookings from that phone.
3) Before he 'disappeared', it was possible to contact John Gold on Dr Susan Watson's home telephone number.

In his letter, Howard Kirby re-emphasised Dr Watson's own statement that, without success, she had been attempt-

A real Transport Studies department – or Institute to be more accurate. A spokesman for Leeds University's Institute stated that they have had no involvement in Door to Door, nor any knowledge of, or direct dealings with the organisation advertising the product, nor with the person we named as Mr Gold.

Picture by Ion Potts

ing to find a forwarding address for Mr Gold. Kirby also asked us to raise any further points with the director of the Institute of Transport Studies, Professor Nash, or himself, explaining: 'This is not because we have any responsibility for the product or organisation you are trying to trace, but because, as her current employer, we wish to ensure that our staff are not unduly harassed'.

We were no closer to tracing the elusive John Gold, but the scope for telephone enquiries seemed to be exhausted. It was time to fire up our copy of *Door to Door*, ask it for a route from Bath to Cranford Place, Wilsden, ignore it, get out the £5 map book, leap in the car, drive to Yorkshire and talk to some people face to face.

A VISIT TO YORKSHIRE
3/5 Cranford Place is part of an unassuming terrace of cottages in the heart of the industrial North.

We banged on the front door, the door through which all those cheques for £19.95 had popped – but there was no reply. The blinds remained firmly drawn and the house was apparently unoccupied. Not unusual for mid-morning – maybe everyone was out at work.

Next door to 3/5 Cranford place is 'The Tuckshop', a traditional corner shop, so we popped in to ask a few questions. We weren't the first people to mention the name 'Geographic' in the shop – it seems quite a few customers of Geographic had trodden the same path...

Mr and Mrs Raby, the proprietors told us that they knew Dr Watson and John Gold – indeed, they told us that Mr Gold had once asked them to 'keep an

eye on Susie (Dr Watson) while he was away on business'.

So we asked them to describe the

"I feel as if I have been thrown to the flipping sharks. He's gone, and I've no way of getting in touch with him. I hadn't met the man before. All I did was look at the program and offer advice, but I'm not a programmer."

Dr Susan Watson, (referring to John Gold).

man they knew as John Gold. They said that he

● **Is between 30 and 35 years old, is about 5 feet 6 inches tall, wears glasses, is swarthy, stocky and suave, has a scruffy-looking beard and is East Mediterranean in appearance.**
● **Had visited Dr Watson for over a year. Since Christmas he had been in attendance regularly, remaining for days at a time, Sometimes his white, W-registered Saab sports saloon with a prominent green stripe**

● *The advert which attracted all the money - Door to Door's claims were never realised.*

As we said in Express 127, buyers expecting a competent route finding program with digitised maps were disappointed by Door to Door. We asked the program to get us from Swindon to Stroud: a simple journey west along the A419 trunk route. The route that Door to Door offered took us out of Swindon in the opposite direction and after a trip around the West Country past Bristol and nearly to the Severn Bridge, eventually deposited us in Stroud via the M5 and A419 from Gloucestershire.

A FAMILY AFFAIR

The Amiga 1500 is a curious beast. Launched by Commodore late last year as a comprehensive computer bundle for the whole family, it was not so much a new machine as a repackaged, cut price version of an existing one, the B2000. As such it attracted much derision from within the industry, many regarding the machine as a bit of a joke. How could you take seriously a computer which seemed to have more effort put into designing its packaging than into its hardware?

However, the 1500 has proven to be a shrewd marketing move which has successfully repositioned a rather unprepossessing business-orientated computer as a viable and attractive all-inclusive bundle for domestic users retailing for under that all important £1,000 mark. It is a computer for the home user who needs something a bit more flexible and powerful than the Amiga 500 which, despite Commodore's efforts, is still generally regarded as a games machine. But the 1500 is being portrayed as a more practical all singing all dancing computer on which Dad can write documents, Mum can keep the household accounts up to date and design clothes for the kids who can play educationally sound games like *Sim City* and *Battlechess*.

The only major difference between the 1500 and the B2000 is that the new machine has an extra built-in 3.5-inch floppy drive. This means that it is extremely expandable – there are memory cards available for up to 17Mb. There are seven vertical expansion slots and the machine is compatible with the same peripherals and add-ons as the 2000, such as the Video Toaster, genlocks, processor accelerators, etc. There are even slots which will take PC cards. The 1Mb of RAM makes it useful for applications like Desktop Publishing.

The 1500 is being portrayed as a more practical, all singing all dancing computer

The extra drive is a godsend for any A500 owner who has had to fiddle around with multiple disks. It is so much less frustrating and time consuming to just click on an 'OK' button when requested to 'place disk A in any drive' rather than having to swap disks. The only problem is that there is no labelling on the drives so, if like me, you have a dreadful memory, you have to keep referring to the manual whenever a program asks you to place a disk in 'dfo 1'.

Included in the bundle is a high quality 1084S

Take a business computer, give it a new name and minor cosmetic surgery – and you have an ideal family bundle. Dave Golder shows how it appeals.

• The Amiga 1500 is basically an Amiga 2000 which has been repositioned in the market

stereo monitor (which you do not get with the 2000) and an impressive collection of software which reflects the family appeal for which Commodore is aiming. Both are major selling points for the 1500 package. A family buying a computer does not really want the hassle of buying separate components; an all-in-one system which is ready to go as soon as it is bought is much more practical. Conspicuous by its absence is a music program to take advantage of the Amiga's impressive stereo sound capabilities, but Commodore reckons that this could be rectified before too long.

Sadly there is no hard disk, but even the standard 2000 does not have one. There are rumours that the company might be upgrading the 2000 to contain a hard disk, but until then the machine seems to have been made redundant by the 1500. The new machine might be aimed at the home user, but it offers the same power, and virtually the same features as its older relative at a much lower cost. As the 2000 retails for £1,295 plus VAT, about £300 more than the 1500, a business user might as well buy a 1500 instead.

Overall, the Amiga 1500 is not a stunning new venture, but rather a successful ploy by Commodore to open a new area in the home market for the Amiga. It is

an ideal starter package for those with a bit more money or a machine to which existing Amiga owners can aspire instead of buying a loads of add-ons or saving up for the much more expensive A2000 and A3000. It may have begun life as a bit of a mongrel, but it could go on to spawn a generation of pedigree champions. ■

THE AYES HAVE IT

AYE
▲ Impressive specifications at a reasonable price
▲ Excellent range of bundled software
▲ Two floppy drives
▲ Monitor included in price
▲ Very good expansion opportunities

NAY
▼ Too similar to the 2000 to have its own real identity
▼ Manual is exactly the same as the 2000 manual

ALTERNATIVE UPGRADES TO THE AMIGA 1500

THE SHELL is not an upgrade in itself, but a casing for Amiga 500 owners to store all their expansion units. It sits under the monitor like the systems unit of the real systems unit and provides a detachable keyboard unit. It has room for various expansion cards, extra ports, new floppy drives and even a hard drive. It requires a little effort with a screwdriver, but the end results are worth it.

The Shell (systems unit and keyboard case) costs £230 and each extra add-on costs £10-£80. Contact A1500 Ltd on 081-907 3636. *Express* will review it soon.

THE BODEGA BAY is a modular expansion console for the A500 which gives the machine 1500/2000-like specifications, including a card cage and expansion bay.

The Amiga connects to the unit via the expansion port and slots in comfortably underneath the unit with just the keyboard showing, forming a solid PC- style console. The Bodega Bay is not currently available, but should be out soon retailing for around £350.

Contact the Amiga Centre Scotland on 031 557 4242. For a full review see *Express* 123.

SHOPPING EXPRESS

EXPRESS MAIL

Write and tell H F-W what you think about almost anything under the Sun! Reach him at: *Express Mail, 30 Monmouth Street, Bath BA1 2BW.* Sorry, no personal replies, even with an SAE and remember, only SOME letters win a fiver!

Remember Pop?

Once long ago there was another weekly computer magazine called *Popular Computing Weekly* – you may remember it. (*err yes... it wasn't very was it? – H F-W*)

One of the features of this magazine was the misprinting of program listings. Imagine the wave of nostalgia that swept over me when I saw the listing for *Dirty Pools* in issue 123 – yep, it's misprinted on line 60. *PCW* used to blame the printers, but as *Express* is 'set' on a Mac, a real minority machine if there ever was one – I have never seen one outside of a shop window. (*I'm not surprised someone would nick it immediately – H F-W*) So who's to blame?

I look forward to the correction next week as used to be the case with *PCW*. Technology comes and goes but human error is eternal.
DGW Griffith
Shepherds Bush, London

And it's over to an ex-listings droid for the reply to this one...

I write as the poor soul who's job it once was to plough through, and in most cases tidy up, BASIC listings for sister magazine *8000 Plus*. There are no excuses for printing incorrect program listings, that's for sure. Blame has been apportioned, so rest assured that the person who designed *Quark Xpress* has been taken out, covered in jam and eaten alive by small bears.

All I really have to say is that printing them in the first place is a dangerous game. Problems arise as soon as you have to make them legible on the page. We can't simply use the hard copy from the machine on which VILE.BAS or TRICKY.BAS were running, because treating text as graphics is notoriously hazardous, and normally unreadable in the finished product. Printing listings so that lines don't wrap produces ugly, unreadable pages which are effectively slabs of IFs, THENs, WHILEs and TANs. Who wants to read something like that? Either they wrap, and you run the possibility of a lost word, or you only ever run progs with lines of 20 characters or less.

To summarise, printing listings should be avoided at all costs, and when it is done it should be with the strict proviso that they are at the readers' risk! By the way the glitch in the *Dirty Pools* was a missing : NEXT f+1 I believe.

Tim Smith

No way to call a lady

Commiserations to Robert Fisher, but my mother, 71 in June, has been using my old Spectrum Plus to play *Scrabble* for the last five years. She also runs a database program on the machine listing all the customers on her Pools round as well as using it to catalogue her huge collection of cookery books.
DGW Griffith, Again

And that's two letters in one issue there DGW – a fiver's on its way to you for this rare feat of exposure. By the way, 71 in June is the most avant garde girl's name I've ever heard.
H F-W

More Square eyes

An Apple Mac portable was on this week's *Twin Peaks*. An Amstrad is offered as a prize on *Catchword*. A Mac is used in the film *Weird Science*. William Shatner enlists the help of some Commodore Pets to save the President in *The Kidnapping of the President* or something like that. In *Police Academy II*, a Commodore 64 is seen playing *Paperboy* with arcade graphics and another Commodore 64 is used in the radio show in the film *Choose Me*.

Pity my A410 has not appeared on one Hollywood production.
Faisal Qureshi, Gatley, Stockport

So it looks as though you forgot all about *Raiders Of the Last Arc* then doesn't it?
H F-W.

Pirates Ahoy

Yo ho ho etc (sound of distant parrot). I've been a pirate ever since I got my C64, and on the Amiga I am worse. Every morning I get up and shift through the huge pile of jiffy bags below my letterbox. And I can tell you someone saying 'piracy is very naughty and will put the prices up' will not stop me.

An article in a magazine complaining about how *Lemmings* was totally pirated within nanoseconds followed by the top 20 charts with *Lemmings* at Number One for three weeks will not stop me. The reason why many games are spread before their release date is because we get them off the developers.

And so why do FAST think that by printing their pathetic adverts they will stop me. These ads are a cross between 1960s public service comic strip adverts and *The Famous Five*; all they do is give us something to laugh at.
Deathbringer 90, Shellford, Beds

If you're so smart why did you enclose your address?

Looks like like the ad isn't very popular from a number of perspectives though - as our next reader points out..
H F-W

Let's Get Serious Now

The National Market Traders' Federation objects most strongly to the advertisement placed in your magazine by ELSPA in their campaign against software theft, on 23 March 1991.

Naturally we do not condone software theft but we would contend it is not exclusive to markets, so why are they singled out in the advertisement?

The unsavoury type of character depicted is a slur on market traders and markets and is offensive to the many honest and genuine market traders in this field as well as detrimental to their business.

We would appreciate the next issue of your magazine pointing out that this advert was not intended to be a slur on market traders or to deter anyone from doing business with them.

John Burton, Deputy General Secretary, NMTF, Hoyland, Barnsley.

Over to you ELSPA for the reply to that one
H F-W

The ST is crap – episode 3782

In issue 125 Jay Lee claimed that the ST ran at 70Hz, but as a fact I know that on a TV it runs at 50 or 60Hz which is the same as the Amiga. Maybe he was comparing an ST through a monitor to an Amiga through a TV which is a bit of a unfair comparison. If through a monitor the ST still runs at a higher rate then I have to admit I don't mind losing a few Hertz for much better graphics, much better (incomparable I'd say) STEREO sound, smooth Medium res and tons of upgrade options (particularly the CDTV).

Having seen on *Tomorrow's World* the CDTV running *XENON II* with 3D sound, I am tempted to buy the CD drive but I have the following questions:

The CDTV has 1Mb chip RAM, while I have 512 chip RAM, 512k fast RAM The CDTV has 2Mb non volatile RAM, and Kick start 3.1 (I got this info from that Amiga supplement) so will I find I can't use all CDTV software, or will I have to make my Amiga 1Mb chip RAM, insert Kickstart 3.1 and somehow get the 2Mb non-volatile RAM?

Could you also tell me if *Wing Commander* will be on cartridge. (Oh no! screams from hundreds of ST owners bawling, still sore after the comments in *Express* of the ST being nothing more than a MIDI controller).
S Oswin, Denton Northants.

The answers are yes you will need lMb of chip RAM methinks and no, Wing Commander won't be on cartridge for the foreseeable future but there again...
H F-W

AS SEEN ON SCREEN

...And so is the Amiga no.2386

Bob Wade's 'editorial' commenting on the possibility of Commodore entering the professional 'fray' with the Amiga gave me a bit of a chuckle. As he rightly points out in his well written little piece, several things have to alter before Commodore makes any inroads into the professional market. The first item I suggest is that someone at Commodore goes out and buys a dictionary and looks up the word professional.

I have used Commodore products ever since my purchase of a Vic 20 about 10 years ago. I have progressed through a 64 and a 128D to my present A500 with all the bells and whistles. The family also own another A500, an A2000 and a PCI, which gives you some idea of the amount of our money that's passed into Commodore's hands since that first purchase!

My use for the Amiga is almost 100 per cent work orientated. Although I buy and maintain all my own hardware and software, most of the work I do is for the government-funded project for which I work. I am not a computer 'tinkerer'; I am a computer user.

I still feel that considering the price of the hardware and software the Amiga is a very good buy for someone in my position. However, the level of support offered by Commodore is such that I have recently had to make the decision as to which computer to put my future in, since I'm about to launch into the DTP business.

End user support was the one thing that made me decide to buy the IBM clone on which I'm typing this letter – it cost about the same as the A3000 that I was considering, but already the level of support offered by the firm that sold me the machine stands out as being way ahead of anything Commodore have ever dreamt of!

Now I could at this point tell you of the nightmare I recently suffered dealing with Commodore Customer Care, and the fact that it soon became obvious that it was actually actively preventing me from getting a hardware problem sorted out. However, a much more basic problem was the real basis for the decision.
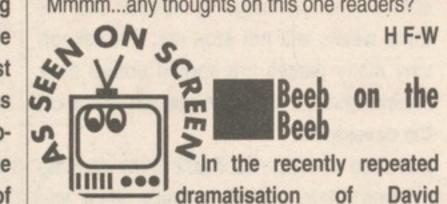
Nine months ago I bought a Preferences supported printer, an HP DeskJet Plus (a really excellent printer that just needs HP to actually market it). All was fine until I tried printing out a page from the desk top publisher – the printout finished mid-line about 10 inches down the page. Several weeks later, and many frustrated hours spent reprinting pages because they were missing all or part of the bottom section, I discovered that it was a printer driver problem. My dealer, with whom I have been very happy, was unable to help, and this is where Commodore customer support is now supposed to start and finish.

Quite what it is able to do at this level I don't know, but several letters and phone calls to Commodore left me with a response rate of about 12 per cent to my correspondence and a rather vague comment that it is working on a solution! Any way, the solution for me is that rather than spending money on its flagship I've loaded lots of software onto the new machine and haven't yet found anything that doesn't give a superb printout on the DeskJet in at least half the time!

Perhaps the answer lies in the general if low-key swing from the company being Commodore Business Machines to just Commodore!

Geoff Crowther,
Beauchamp, Leicester

Mmmm...any thoughts on this one readers?
H F-W

Beeb on the Beeb

In the recently repeated dramatisation of David Lodge's *Nice Work* Dr Robyn Penrose not only used a BBC micro to type out her new book about female novelists but also claimed to have stayed up all night printing out the draft.

Hardly surprising that it took her so long as there was no indication that she owned a printer, let alone a sheet feeder.
Martyn Dryden, Wimborne, Dorset

Pee CW

At a meeting of our Area User Group, Micro-Design User Group – as seen in your *Express On-Line* – one of the things brought up for discussion was the inevitable 'My computer blah, blah, blah...' It appears that the lowly Amstrad 8512 with its 9-pin printer comes out on top or bottom as is the case in point here. My friend Brian has a wife and four children. The youngest being about one year old and on odd occasions she has been caught short while trying to get to her potty. As you can guess my friend found while moving his printer it had developed a leak – after emptying it and leaving it to dry it works as good as new.

So, His Computer Printer Works Better After Being Peed On Than Your Computer Printer.
David Marples, Barnsley, S. Yorks

We're afraid Alan Sugar was unavailable for comment on this one, but we'll keep trying his number.
H F-W

Why Indeed?

I write in reply to Jay Lee's letter on Amiga DTP. He is talking through his exhaust when he says that the Amiga was designed as a games machine. If this is so, then why was it fitted with a parallel port and a keyboard? Why was a mouse supplied with it? Why did Commodore wire business software for it? Why was a hard drive designed for it and why was it originally not supplied with a TV modulator? If it was designed as a poor man's arcade machine none of the above would have been done.

His outlook on Amiga DTP is tunnelled as far as I can see. There are many professional DTP programs on the Amiga that rival software twice the price on other machines; *ProPage*, *ProSetter* and *Pagestream* for instance. Obviously the Amiga can never rival a Mac IIsi but then it doesn't cost several thousand pounds.
Simon Richards, Twickenham, Middx.

Advertising Standards

On the December 17 last year I purchased a 50Mb hard drive from Third Coast Technologies at Standish, and left an Atari SH 204 for repair.

In January I complained that the clock did not function and, contrary to the advertisement for this drive, I did not think a fan was fitted.

I was informed by the spokesman for TCT, a Mr J Miller, that the company did not feel that a fan was necessary, and as for the clock problem I should use one made by Frontier.

Since then I have telephoned 11 times regarding my SH 204 and every time I've been told that the person handling that repair is not available. I have also written four times, the last two being recorded delivery, and I have not had a reply.

So before I follow the advice of the officer of fair trading I was wondering if you could inform me if there is a trade association to which I could appeal because I believe this company has recently been taken to task by an advertising body.

I do hope you can assist me in this matter.
K Leyland, Manchester

I should check out the Door to Door news feature elsewhere in this issue where you'll find more info on trading standards. But no trading association as such exists I'm afraid..
H F-W

Where does it all go?

To add to the discussion about the price of software: Your recent explanation of where the £20 goes in the making of a computer game helped answer some questions, but it also raises some. What about games for the Spectrum and Commodore 64?

Games for these great computers cost about half the price of 16-bit games. Licences still have to be paid for and the tax man still has to rip us off, so why is there such a vast difference in prices for 8-bit and 16-bit games?

I don't think this happens anymore but I remember a few years ago when advertisements for Ocean games displayed the prices of games for different formats. The Commodore and Amstrad versions always cost £1 more than the Spectrum versions. Odd.

And what of business software? Why does a lot of it cost hundreds of pounds? It can't just be just because it comes with telephone director-sized manuals.
Daniel Walker, Reigate, Surrey

A good couple of points there Daniel- and ones which the Editor has decided to take up in a forthcoming feature.
H F-W

Useful tips...

I would like to start a new debate: who gets the most use from their *Express* when they've finished reading it? Or the daftest thing to do with their *Express* when they've finished reading it? I use mine on my bedside lamp as it's too bright and I can't get a dimmer bulb. Plus, if I get the urge to read it again it's close at hand.
Pamela Curry, Watford, Herts

...Just watch Express doesn't burn down the house though won't you **H F-W**

• Final proof that Express leaves everything else in the shade!

...And absolute tips

When I was watching *Why Don't You* on April 3 I spotted a copy of *New Computer Express* lying under a piece of rather rubbish artwork. It had obviously been used to protect the floor while these strange people painted. Hopefully they will get a slap across the face for using this TOP magazine instead of a newspaper. Is this worth a fiver Haydn?
Richard Clarke , Leeds

I think it probably is – well spotted. The *Express* office is of course littered with copies of...er.. *Express*. Millions of them in fact. Perhaps we could start a "My Floor Is Deeper In Rubbish Than Your Floor" (MFIDIRTYF) debate here. We use them to cover up the sackfuls of press releases we receive announcing things like 'Ron Gubbings appointed Sub-Group Sales Director of Knobsoft' and 'Commodore CDTV due in the 1990's, honest chaps' and so on. **H F-W**

• The Express office with resident copy droid and ever encroaching piles of debris

Macintosh

RUMOURS...

Claris is reputedly about to launch a new, integrated package containing a spreadsheet, database, draw program and word processor. This is likely to be based on cut-down versions of *MacWrite*, *MacDraw*, *FileMaker* and a spreadsheet. It's basically going to be aimed at people who buy Mac Classics and StyleWriters, so the price should be reasonably competitive.

If that sort of package sounds attractive to you, you could do worse than take a look at *Microsoft Works*, which has been reduced in price by 25 per cent to £145 until the end of May. Although it's now a little long in the tooth, *Works* has many users who've never found the need to buy anything else. It consists of a word processor, spreadsheet and database, and also has a comms module and some drawing facilities built in. You can get hold of Microsoft on 0734 391123; *Works* is available from vast numbers of software distributors.

Apple in the States managed to thoroughly annoy most of its dealers with an advert which it ran in various newspapers a month or so ago, advertising Macs. The ads had a strapline which said something like, "the prices quoted are recommended retail. But who pays retail anymore?" This upset all those dealers who were quite happy charging retail prices to anyone willing to pay.

On a similar vein, if you're thinking about buying an expensive Mac setup (say, a IIci, external hard disk and large monitor), don't immediately pay the list prices if you buy from your Apple dealer. Ask what kind of discount he'll give – some have been known to give 15 per cent or more. Don't bother trying this with the low-cost Macs, though – the dealer's profit margin is so small

that there's no way you'll get a discount.

A Japanese newspaper is claiming that Apple Computer Japan will sell a handwriting input device for the Mac this April. It consists of a tablet, pen and software, and connects to the ADB port. The newspaper reckons that the price will be in the region of $770.

Here's a little-known fact; you can add 512k of video RAM (VRAM) to your Mac LC. Ok, you may already know that you can do that to increase the number of colours that the 13-inch monitor can display from 16 to 256. But did you realise that, if you have a 12-inch colour monitor, adding the VRAM will increase the number of colours displayed from 8-bit (256 colours) to 16-bit (several thousand colours). Neat if you want to retouch photos or if you have a 24-bit paint program and you want to use it to the full. Apple's list price for the VRAM is £145 plus VAT. Oh, and if you want any details of Apple products, you can phone free of charge: dial 100 and ask for Freefone Apple. Just don't expect answers to technical questions.

NEW GAME DISTRIBUTOR

Cache Connection, a London-based Mac peripheral distributor, has been appointed as the UK distributor for Accolade Europe's new range of Mac games. So far there are about 15 games available, including *Jack Nicklaus Greatest 18 Golf* (£34.99) and *Ishido* (£34.99 – see the next item for a review).

The advantage of buying from Cache Connection rather than a grey importer is that the company has close ties with Accolade, and so should always have good stocks of the games. If you want to get hold of Cache Connection's catalogue, called *Product Suitcase*, give the company a ring on 071-407 3463.

POSTCARD FROM AMERICA

I had the good fortune to attend MacAble—Tools for Independence, a small show on the University of California campus. It demonstrated hardware and software for users that have difficulties with hearing, mobility, and vision.

I really love a good hack—especially a free one. Brothers, Alan and Mark Hayutin, who run a pre-press, typesetting business, were showing a mouse with special abilities.

Almost ten years ago, after an accident, Alan found himself in a wheelchair, with limited control of his hands. He wanted to use a computer, but like many others, had trouble with MS-DOS flavoured computers. The brothers were on the right track when they were turned on to the Lisa in 1983, and bought a 128K Macintosh when they hit the market. But Alan was still having trouble pressing the mouse button.

He could move the mouse, but his limited finger dexterity prevented him from clicking the button. They wondered if the click function could be separated from the mouse movement. The Apple Disabilities Workshop engineers built a special two-

headed serial cable that allowed the simultaneous operation of a mouse, and a click switch that Alan could control with his other hand. Alan, who had thought that he would never draw again, was now back at the sketchpad.

Recently the brothers upgraded their system to a Macintosh IIci, bringing a new headache—their mouse hack was obsolete. The new Mac models use the Apple Desktop Bus mouse.

Apple engineers were unfortunately not up to the task this time. Mark told me, "They came up with several solutions, none of which worked."

Another reason to retire the word solution. They should have known better than to suggest using two mice at once. Each mouse is independent, pre empting the business of the other.

Fortunately they hooked up with the Berkeley Macintosh User Group's hardware guru, Chuck Meyer. He came up with the correct method for finding the pin-outs for the switch. The adventure, complete with do-it-yourself diagrams will be recorded in the Fall BMUG Newsletter.
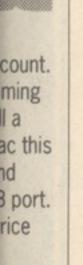
David Morgenstern
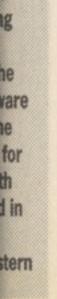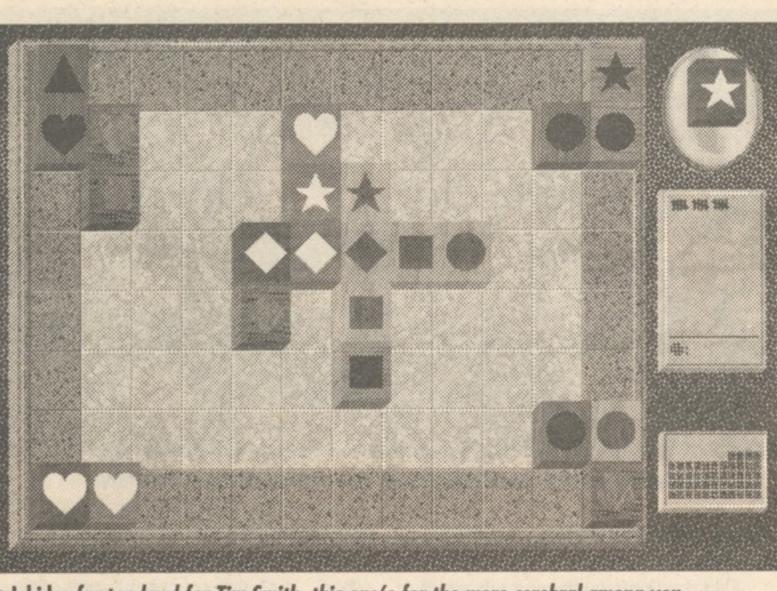
• Ishido: *far too hard for Tim Smith, this one's for the more cerebral among you.*

IT'S ALL FRENCH TO ME...

GuildSoft has just released a range of Mac foreign language learning courses, written by HyperGlot Software. The languages covered are Chinese, French, German, Italian, Japanese, Russian and Spanish. According to the press release, "the courses are modular in approach, with each module concentrating on a particular aspect of the learning process."

It goes on to list the modules including *Pronunciation Tutor with Sound* and *Verb Tutor with Sound*. But the one that really caught my attention was the first on the list, which is used for building vocabulary. Fancy using a program called *Word Torture*, anyone?

If that hasn't put you off, you can get hold of GuildSoft on 0752 251155. The courses cost between £39 and £129 plus VAT.

ISHIDO

Ishido, subtitled *The Way of Stones*, is one of the Accolade games now available from Cache Connection. The concept is simple – place tiles on a board so that they match the ones already in place, either by colour or by pattern – but actually doing well at the game is somewhat more difficult.

If you have a colour Mac the graphics are superb, although it works perfectly well in black-and-white. The game is protected by one of those disks with hundreds of combinations, so at least you don't need to insert a key disk every time, and… er… that's about it.

Whether the game is worth the £34.99 cost is up to you; all Mac games are on the expensive side, and this one costs no more than most. If you're interested, give Cache Connection a bell on 071-407 3463.

Ian Wrigley
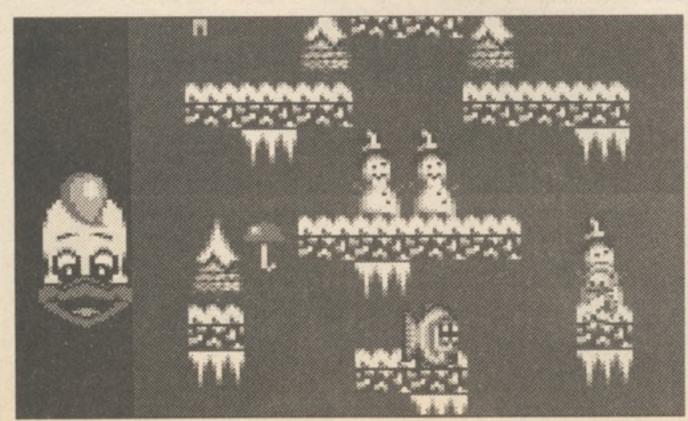
EDD THE DUCK

Fans of children's TV will know Edd the Duck already; he's one of the more intelligent children's presenters. Well now he's achieved the fame he deserves, and stars in his very own computer game, thanks to Impulze.

Edd the Duck is basically pretty standard platform fare, but set in the various departments of the BBC! There are several different levels, and on each one, Edd must collect all the stars left lying around on the platforms. To make things difficult, a butler called Wilson

and his bunch of baddies wander around. They are difficult to avoid, but they do move in specific patterns which you can learn. Being touched by one of the baddies does you in, so watch it! You have four lives (or 'takes') to see you through, though.

The graphics really are incredibly cute – cuter even than those in *Rainbow Islands*. The comparison springs to mind in more ways than one because both games have you scaling a vertical system of platforms. Unfortunately (for Edd!), *Rainbow Islands* plays better. It's

• Those snowmen won't do you any harm, but that large, green fish will! The umbrella's none too friendly, either

• *The giant bees might look friendly, but touch one of these and you lose a 'life'.*

generally smoother and has the added attraction of power-ups.

Edd the Duck is jolly enough and it has the attraction of the TV link. But it is not really one of the all-time greats.

SPRING COLOUR
DTP fans and other serious types will be interested to know that both Star and Citizen are offering special promotions on selected printers whereby buyers get a free 'colour kit' with their machines.

Citizen's promotion applies to its four Swift dot-matrix printers – the 9-pin Swift 9 and wide-carriage 9x, and 24-pin Swift 24 and 24x. The colour kit would normally cost around £40. The promotion is only lasting, however, until the end of May.

Meanwhile, Star is offering a similar deal on its FR-10 and XB24-10 'Professional' machines. The other good news for potential buyers is that the Professional range as a whole is down in price. For example the 9-pin FR-10 is down £60 from £459 to £399 and the 24-pin XB24-10 has been chopped £100 to £499.

Citizen can be reached on 0895 72621, while Star's number is 0494 471111.

GO ON-LINE – FREE!
Printer buyers aren't the only ones getting the chance of a bargain at the moment. Comms freaks could be saving a few clams from now on too, thanks to Micronet's changed pricing structure. Subscribers can now access the network completely free during off-peak hours (barring the cost of a local phone call). The only snag is that the quarterly subs are now up from £20 to £30. For business users, the subs stay at £30, as previously.

Peak time access charge for Micronet is 8p per minute, so heavy users stand to gain substantially from the new rates. To find out more, call Micronet on 0442 237237.

THE FRENCH CONNECTION
French company Loriciels has a couple of interesting games coming up soon. The first is *Quadrel*, a one or two-player thinking man's game (uh, think I'll give that one a miss) where the opponents are presented with a grid of blank squares which they have to fill with colour. The one rule is that two adjacent squares cannot be the same colour. Hmm... sound's very, well... sounds very, er, stimulating. I'll let you know on that one.

The second game is *Disc*, a game which should be great for everyone who's ever tried taking their mate's head off with a Frisbee. It's set long in the future, where armoured gladiators

face each other across a chequerboard playing area and lob steel discs at each other... well, not actually at each other – the idea is to take out the squares that make up the scenery and send your opponent plummeting into a bottomless abyss. Charming.

Loriciel is no longer distributed in the UK by US Gold. All is not lost, however, because the company's products will now be handled over here by Infogrames.

CHEATS ALWAYS PROSPER!
John Brown of Wittering has come up with cheats for two games on *Amstrad Action's* issue 64 covertape! (Cheeky devil...) First of all, the *Puzznic* demo:

```
1 '*****************************
********
2 '**** Puzznic ** AA Freebie
****
3 '**** JOHN BROWN ** Dec
1990 ****
4 '*****************************
********
5 '
10 'Adams Puzznic loader
20 OPENOUT "x":MEMORY
&4FF:x=&8000
30 READ y:IF y=-99 THEN 50
40 POKE x,y:x=x+1:GOTO 30
50 MODE 1:INK 0,0:INK
1,26:PRINT"Loading
55 LOAD"!PUZZNIC.BIN",&500
56 POKE &4405,0:' Inf.
retries
57 POKE &5E30,0:' Inf. time
60 CALL &8000
70 DATA
&f3,&01,&00,&70,&11,&40
80 DATA
&00,&21,&00,&05,&ed,&b0
90 DATA &c3,&40,&00,-99
```

And secondly, a Cheat for *Lost Caves*. (Just delete the line containing the cheat you don't want.)

```
1 '****************************
********
2 '**** Lost Caves ** AA
Freebie ****
3 '**** JOHN BROWN ** Dec
1990 ****
4 '****************************
********
5 '
10 INK 0,0:INK 1,26:MODE 1
12 LOCATE
9,10:PRINT"Loading..."
20 OPENOUT "a":MEMORY &6FF
30 LOAD "!caves.bin"
40 POKE &1128,0:' Inf. lives
50 POKE &10E3,3:' Number of
lives
60 CALL &1000
```

Rod Lawton

Amiga

GENLOCKING ON THE CHEAP

Everyone knows that the Amiga is the machine to own if you're into such 'new age' applications as multimedia and Desk Top Video (DTV). Not only is the range and quality of such software second to none, but much of the hardware needed to get up and running is considerably cheaper than similar devices on other machines.

Take the genlock, for example. If you buy a genlock for a PC then you can expect to pay through the nose for what usually ends up being a rather underpowered device. The Amiga, on the other hand, is absolutely spoilt for genlocks. Whether you're buying equipment for the BBC or just an eager home user, then there's a genlock to suit your needs and budget.

Until recently the only choice for home users on a very tight budget was Applied Engineering's now infamous MiniGen unit. Sure, it was very cheap, but it was hardly going to win any prizes for either quality or features – put simply, it was pretty naff. In most cases, those with any sense ignored MiniGen all together and took the wise decision to plunge in and spend a few extra pounds for a higher quality unit (Rendale's A8802, for example). Unfortunately, the next cheapest genlocks cost over £200 which is far too much for most people's pockets.

If you're feeling the effects of Mr Major's recession, then Silica Systems has some good news for you. It has just taken on the UK distribution of a rather nifty little genlock from the States which answers to the name of RocGen. For just £117 you get a genlock that boasts many features previously found only on genlocks costing considerably more.

It is a pretty well endowed genlock which will allow you to overlay Amiga graphics onto any incoming composite video source (usually supplied by a video camera or home VCR). and then have the results recorded out to a second video deck.

OK, nothing special so far, but what really makes RocGen shine is that (unlike most genlocks below £500) it boasts powerful fading and overlaying features. Both of these can be controlled in realtime using a built-in control knob, so there's no fiddly

software with which to mess around.

Fade mode allows you to change from a solely computer generated display to just the incoming video signal. Very similar is the overlay mode, in which the incoming video signal is permanently displayed, but you can fade in and out the Amiga graphics. This is particularly effective when used in conjunction with a decent video titling package.

As you can probably already appreciate, the RocGen represents a breakthrough in price versus performance for genlocks. Put simply, no other genlock below £500 offers as much as the RocGen. Picture quality isn't quite broadcast quality, but Silica claims that it is still significantly better than that obtainable from MiniGen.

Interested? If so, then give Silica Systems a call on 081 309 1111. You can expect a full review of this ground breaking device in a future issue of *Express* (as soon as my review model turns up, basically!).

VIDEO SOLUTION

If you're in the market for some pretty high end video applications, then you're sure to have your fancy tickled by a new release from Eschalon Developments. The company has just released a package which it claims is 'everything you'd ever need for video production'.

A bold claim perhaps, but Eschalon seems to think that the £300 package delivers the goods. The package contains separate utilities for creating subtitles and credits, a teleprompter, an image presentation utility (a slideshow), a video pattern generator, colour bar and safe-area generators (wot?), text scroller, nine DPaint-compatible colour fonts and even a complete multimedia presentation system generator called Ascension.

If your bank manager can handle the phone bill, then contact Eschalon directly on 0101 604 520 1543. If I hear of a UK supplier, then I'll tell you.

SNIPPETS

Precision software has launched a new version of its acclaimed relational database management system *SuperBase Professional*. Version 4

• SuperBase Professional 3: there's a brand new Workbench 2.0-compatible version out soon.

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All of our ribbons are GENUINE manufacturer ribbons - NO copies!

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5 x LC10 Black Ribbon	£16.95
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5 x LC10 Colour Ribbon	£24.95
1 x LC24/10 Ribbon	£4.75
5 x LC24/10 Ribbons	£22.00
1 x LC200 Colour Ribbon	£10.00
5 x LC200 Colour Ribbons	£50.00
1 x LC24-200 Mono Long Life	£7.50
5 x LC24-200 Mono Long Life	£37.50
1 x LC24-200 Colour Ribbon	£11.00
5 x LC24-200 Colour Ribbons	£55.00
Swift 24 Mono Ribbons (each)	£5.00
Swift 24 Colour Ribbons (each)	£13.95

ATARI LYNX

Lynx Games Machine - (with California Games)	£117.50
Lynx Games Machine - (no free software)	£95.00
Lynx Carry Case	£14.99
Lynx Sun Visor	£6.99
Lynx Car Adaptor	£9.50
Blue Lightning	£19.99
Chips Challenge	£20.50
Electrocop	£19.99
Gates of Zendocon	£19.99
Xenophobe	£19.99
Robo Squash	£21.00
Road Blasters	£19.99
Rampage	£21.00
Ms Pacman	£19.99
Shanghai	£19.99
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star FREE CABLE WITH ALL PRINTERS

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Star LC200 Colour (9-pin)	£225.00
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Star XB24-10 Mono (24-pin)	£479.00
Star XB24-15 Mono 15" (24-pin)	£609.00

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Panasonic KXP1624 15" (24-pin)	£389.00
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Citizen 124D (24-pin)	£235.00
Citizen Swift 24 (24-pin)	£299.00
Canon BJ10E Portable Bubble Jet	£349.00

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Star XB Colour Kit	£34.99	Deskjet - Ink Cart	£14.99

ATARI ST ACCESSORIES

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Megafile 30 Hard Disk	£399.00
Megafile 60 Hard Disk	£529.95
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Forget-Me-Clock II Card	£19.95
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STFM MKII 8833 lead	£12.99
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Dr.T Tiger Cub (ST)	£64.99
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C-Lab Notator Alpha V1.0	RLNG
C-Lab Creator V3.0	RLNG
C-Lab Aura ★NEW★	RLNG
Steinberg Cubase V2.0	RLNG
Steinberg Cubeat ★LOW PRICE★	RLNG
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Contents : STOS, First Basic, Hyper Paint II, Music Maker II 8 games
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SONY BRANDED 5.25" 2D	7.95	14.95	21.95	34.95	68.95
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TECH TIPS

Not sure if US software will run on your machine? Need some tips on programming data? Or even got some tips you can share? Send your stories and queries to Keith Pomfret, Tech Tips , New Computer Express, 30 Monmouth Street, Bath BA1 2BW.

■ FAME is the spur

If you have a home grown program that you wish to share, all that you need to do is follow a few simple rules and you could go on the program register.

1) The program must be for Amiga, PC, ST, Mac, Archimedes, CPC, SAM, QL or C64.

2) By sending it to Tech Tips you place it in the public domain.

3) It must be on a disk.

4) The disk must be labelled with the program name, your name and phone number, the machine that it runs on and what it does. Any disks not labelled thus will be formatted and given away.

5) The disk must contain the program and any data or libraries that it needs to run. It must also contain the listing or source code for the program in plain ASCII format.

6) You must include on typed or printed sheet listings or source code, details on what language and implimentation it was written in.

7) You must consent to the publication of your phone number. This is so that like minded souls can get together. Experience has shown that when more than one person works on a program or project, the results can be stunning. (Marriage of minds and all that)

All of the programs will be run to verify that they work. Those particularly good will be featured in Tech Tips or Circuit City and the rest will go into the register which will be published from time to time. and used as a source of help in Tech Tips.

If you have a program that fills the above criteria send it to *Express* Tech Tip Proggy-Hole, 29 Monmouth Street, Bath BA1 2BW.

Anyone sending pirated, stolen or refurbished programs will be shopped.

■ HELP! American Amiga

At the end of April I shall be going to America for a few weeks study leave (I know, terrible life isn't it) and I thought to myself, what a great chance to lay my hands on some wangdangdoody American software, for my Amiga A500

But, my precocious son informs me that American software will not run on British spec' machines. I've asked a number of "informed" people who tell me they know the answers to these sort of questions, but their advice is contradictory.

So before I exchange my hard earned travellers cheques for some potentially useless software, I would be inordinately grateful if you could give me a definitive answer to this perplexing conundrum.

I realise you must be inundated with readers enquiries, but I really would appreciate an answer before my departure the 27th of April.
Dr Mark Stevens,Oxford

How could I resist the opportunity to make a doctor inordinately grateful. The simple answer is that Amiga software in the US will work on a UK machine. The difference between a US and UK Amiga is the display. In the UK, we use the PAL system of 625 display lines on the screen and everything kept hunky-dory by a 180 degree alteration in phase on alternate lines. This is why the UK TV system looks so good compared with the nasty US system.

In the US they use a 525 line standard called NTSC (and known to engineers as Never Twice Same Colour). The US system doesn't benefit from Phase alternation and the colours tend to drift. This is why on some US TV sets you see a tint control. This helps to redress the colour balance .

As you can see by the numbers, the US system is 100 lines per screen shorter than the UK system.

Well written software will first check to see what sort of machine it is running on and then adjust its display accordingly. Software sourced in the US, though, may not be able to do this and will consequently produce a shorter picture on the screen.This won't stretch or squeeze the picture or interfere with the aspect ratio in any way. The picture will be in correct proportion, only shorter. This isn't a problem as many imported games have been sold in this country with the short NTSC screen and although a waste of display area, it doesn't affect the playability.

Having said all of that, no Amiga will always be 100 per cent compatible with every piece of software and sod's law dictates that the one game you buy in the US will be the one that bombs out. Have a nice trip and send us a postcard.

■ HELP! Big screen

Is there any way to attach a large screen monitor to an Amiga B2000. I have tried connecting it to a TV set with a 21-inch screen, but the result was more fuzzy than a Spectrum Hi-Res display and even games became painful to look at. The TV has a composite video input, but this is black and white when connected to the Amiga's composite video output.

I don't want to get more information on the screen in the manner of DTP where up to an A2 screen can be displayed. Just producing a larger Amiga screen will be good enough. I'm sure that there's a way to use the TV, but what price large monitors? I heard that a simple colour A3 sized monitor for a DTP set up could run into thousands. Am I stuck with the telly?
Dave Morgan, Pinner

To connect your B2000 to the TV you must be using the Amiga modulator. This has an output giving composite video that should give you a colour picture on your TV. The composite output is next to the input for sound and is a standard phono connector.

If you don't want to spend thousands upon thousands buying a hunky colour monitor there's some good news for you. Another batch of Canadian JVC Electrohomes has come into view See the next letter.

■ HELP! Big ones

Recently some of your correspondents have mentioned a monitor called an Electrohome which no-one seems to know much about. I, too, have ended up with one of these heavyweight monstrosities. Has any information come to light about them?
Neil Fisher, West Midlands.

Yes it has. The Electrohome is a 90 pound heavyweight heavy duty steel composite video monitor in a cabinet. These were constructed by Electrohome in Canada using proprietary and JVC parts. In its standard form the electro-home is a composite colour monitor, but brutec in Manchester is selling them with a modification to take an RGB input via a SCART connector.

An electrohome is winging its way down the M62, M6, M5 and M4 and when it arrives (soon we hope) it will go under the Circuit City Spotlight.

■ THANKS! One and all

Please could you publish a letter to say thank-you to all the readers who took the time to help me with the sort on my BASIC program. I have now incorporated a sort successfully and have achieved the desired results – well almost; I haven't won a jackpot yet.Thanks again and keep up the good work.
Trevor Cobbe, Leicester

Thanks to the hundred plus people who solved Trevor's problem in various ways. As there are obviously many of you out there with a bent and a will toward programming, I'm opening a proggy-hole in Tech Tip

■ TIP! Age of Aquarius

Here is some info from Mr Bentham (*Express* 121), for Aquarius. If they are still available:-

The Aquarius and how to get the most from it. By Ian Sinclair, Published by Granada Publishing Ltd, 8 Grafton Street, London W1X 3LA. ISBN 0-246-12295-1

The Aquaruis Program Book by Peter Goode. Phoenix Publishing Associates, 14 Vernon Road, Bus Hey, Herts WD2 2JL. ISBN 0-9465-7608-4.

Also Football/number randomizer. In Stos Basic.

```
10    KEY OF : CLW
20    CENTRE "NUMBER RANDOM-
IZER" ; PRINT
30    INPUT "SELECT NUMBERS TO
RANDOMIZER 1 TO ";AR
40    INPUT "NUMBER OF SELEC-
TION 1 TO ";ES
50    DIM A (AR), Z (AR)
60    FOR I=1 TO AR
70    A (I) = I : Z (I) = 0
80    NEXT
90    FOR D=1 TO ES
100   B=RND (AR)
110   IF A(B)=0 THEN 100
120   Z (B) = B
```

```
130  A (B) = 0
140  NEXT
150  FOR D = 1 TO AR
160  IF Z(D)=0 THEN 180
170  PRINT Z (D)
180  NEXT
190  PRINT : PRINT : PRINT
"WILL YOU BE MAKING ANY MORE
SELECTIONS:-"
200  INPUT "ENTER Y OR N"; K$
210  IF K$ = "Y" OR K$ = "Y"
THEN CLW : GOTO 60
220  IF K$ = "N" OR K$ = "N"
THEN END.
```

For anyone needing more 20 selections insert line 'no' 165 wait key.
D George, Cleveland.

HELP! Printer memory

Over the years I have read some great answers to knobby questions posed by your readers and now hope you may be able to help me.

I have an Epson LX80 DMP (an oldie but a goodie!) which is blessed with a tiny printer buffer (it's also on loan to the "Brother-in-Law" at the moment, hence old-fashioned pen and paper) and I am curious to know if it can easily be upgraded with the currently available supply of cheap RAM. I'm thinkiing of about 64K, more would be nice, but perhaps I'm being too optimistic. If not, what will fit in?

I'm what you would call a "wipe-head" I suppose, although I normally work on slightly bigger stuff (high-powered TV transmitters and the like) so fitting would be no problem in the workshop at dinner time or after hours.

I know I could use a cheap PD printer spooler with my computer but the printer is going to be used for other things, and it seems to me it would be easier to pop in a few K or so of RAM rather than construct a separate parallel print buffer (just another box to clutter up the bench etc etc).

So if you could indulge yourself in a little investigative techno-journalism on my behalf I would be most grateful. Thank you.
M I Stollor, Manchester

The sort of 64K upgrade that you describe would be fine if there was anywhere to slot the chips. The folks down at Epson tell me confidently that there isn't so it's the dreaded PD spooler or the elegant print buffer.

If you've an old micro lying around, you could quite simply write a program in BASIC to turn it into a spooler. We've used a 128K Apricot in the office for this and we know of people using life expired BBCBs, CPCs C64s, etc, as printer buffers. I'm sure that several of our readers will also offer programs to do just that.

TIP! First CUT

With reference to the letter from Neil Hirst of Hereford in *Express* 121, concerning his problem converting CUT graphic files.

The PD version of ICONVERT has a number of features missing, however, if he purchases the full version (Revision 1.49) he will find that it will convert both to and from the following formats:

ASCII, BLOAD, CompuServe, Dr Halo II, Doodle(CBM), First Publisher,FONTASY, GEM, IFF, MacPaint, NewsMaster, Newsroom, PC Paintbrush, Printmaster, Printshop, Windows Paint

CUT files can be converted using the Dr Halo II option and details on how to obtain a full version are included in the DOC file accompanying his PD version.

Another alternative, again not PD, is a program called The Graphics Link Plus version 2.00b by Terravision Inc. This package will convert graphics between the following formats:

Zsoft File Format PCC or PCX, Microsoft Windows, Paint, MSP, GEM/Ventura Publisher IMG, Aldus Pagemaker, TIFF (TIF) PIX, EGA/VGA Paint+/Pictor PIC, Dr Halo CUT, Macintosh MacPaint, WordPerfect Graphics Format WPG, Show Partner /FX (GX1), PFS First Publisher MAC, CompuServe GIF format and Lotus Manuscript Bitmap BIT.

In addition it offers a number of features such as: Dither colour images/Trace colour or BW images – Scale Images –Print Images.

I hope this information solves the problem and if Neil requires any "instant" conversion I will be glad to help. He can contact me on 0707 271529 after about 8pm any evening.
Brian H Barton, Hertfordshire

HELP! Modem economy

I'll try not to take up too much of your time with my questions.

I own an Amiga 500 and I am contemplating Purchasing a modem.

Which one would be cheaper and more economical to run – a 24 or 4800 baud rate?
Neil Roach, Gwent

A 2400 modem would be cheaper to buy but as a 4800 modem runs twice as fast, if you plan to do a lot of uploading and downloading, the 4800 modem would soon pay the price differential back in smaller phone bills.

TIP! data dater

In response to the plea in your column on the 124, here is my attempt at a dating/matching program for the Amiga. I have tried to make it as simple and quick to use as possible. For instance, all the data is put into RAM: when the program loads, to speed up searches.

Instructions can be found in the readme doc file - the disk just autoboots.

Alzoloads (couldn't think of a better name) is written in Amos, which is not the best language for this sort of application. I am attempting C, having got the Socobon C computer, but there are so many flipping (<{[]}>) brackets! How about an easy guide to C in a future issue?
Alan Singfield, Merseyside

It works fine and we've passed it down the line to the guy who wanted to put his card index dating agency on computer. He's chuffed as a dog with two tails and this is the first prog to get the *Express* Proggy-Hole seal of approval and go in the library.

TIP! Specload

Regarding "Help! Spectrum interface" in Tech Tips issue 114. Could you pass the following information on to Simon Longland re reloading snapshot images saved using the Technology Research disk interface.

To reload a snapshop image : GOTO "filename" CODE <ENTER> if this fails to work, rename the file such that it begins with a "$" and try again (something to do with some games using a non-standard key scan routine!?). NB The disk(s) used for snapshot images MUST be formatted as single-sided.

Sorry to reply so long after the query was printed - but as they say, better late than never!

Where can I get a 2:1 SCART switcher from? I've got an STFM and an A500 but only one 8833 monitor and I don't want to keep swapping the leads over.
Richard Jibson, Stockport.

You can get the SCART Switcher from Trilogic on 0274 678062. Thanks for the tips and help.

HELP! Amiga IBM drives

I have an Amiga A500 and spent the last of my cash on a Trilogic memory upgrade (to 1Mb), a SCART switcher and SCART monitor.

Now I find that the Amiga with one disk drive is about as much use as a one legged man in an arse-kicking contest. We didn't do woodwork at school when I was a lad so I'm not able to make a peg-leg for the Amiga. Drives are very expensive and I can't afford them but I am in a position to buy cheaply a couple of IBM clone 720K drives for £15 each. We are going over to the high density 1.44Mb kind at college so these are available.

Everyone in the world says that you can't use an IBM type drive with an Amiga, but I'm sure Uncle Tech Tip knows different.
Allan Taplow, Walsall

It is possible to persuade an Amiga to talk to a PC drive directly, but you will need to be a fairly competent solderer and have a good grasp of logic and circuit construction.

The power for the first external drive on an Amiga

can be taken directly from the Amiga but if you are planning to connect any more peripherals the Amiga's power supply will probably curl up its toes and die at the thought.

If you' want to err towards safety, you'll need a separate power supply providing the necessary 12v and 5v. These can generally be picked up at computer fairs and auctions, but should be checked with a good multimeter to see if they are still within specification. A reasonable price to pay for a stable power supply at an Auction or computer fair is about £8-£15.

Often it is possible to get power supplies that were originally intended to supply power to hard disk computers. These invariably offer more power than you need for a couple of disk drives and a few peripherals.

In order to connect your PC disk drive to the Amiga, you need a couple of logic chips, seven resistors and two quarts of midnight oil. The layout is on stripboard (Tandy sells this) and all of the other components are easily sourced. The diagram shows cuts marked in the strips by a diagonal mark. The
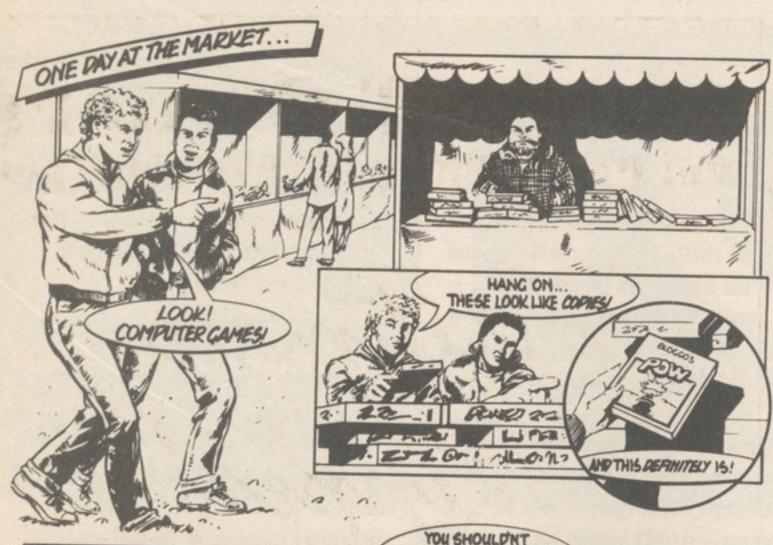
• You can get your Amiga to talk to your PC.

stripboard should be at least 25 strips wide and a similar length.

This isn't a simple projest and is fraught with danger for the unwary hobbyist. Don't even think about attempting it unless you are prepared to risk your warranty and your Amiga.

On the up side, if you don't feel like doing it yourself, you could ring Paul Simpson at Simpson Electronics who redesigned this board from an earlier and slightly less satisfactory effort. He should be able to build you the necessary board and advise you on power supplies.Simpson is on 0332 760353.

boasts many new and undoubtedly useful features, but the major change is the inclusion of an all-new Workbench 2.0-like user interface. Let's just hope Precision has also scrapped the bloody stupid dongle protection that they used within previous releases (I hate dongles!!!!!).

You can expect a full review of *SuperBase Professional 4* in *Express* as soon as I can sweet talk Precision into sending me a review copy, but you can find out more by contacting the company on 081 330 7166.

On the subject of video software, ZVP has announced the impending release of a new professional version of its Video Studio system. Described as an 'integrated video post production system', VideoStudio Professional offers powerful titling and captioning software, plus such things as clocks and test cards. For more information, contact ZVP on 0268 411719.

Commodore has produced an all-new and vastly enhanced version of its BBC Emulator, The Emulator (catchy name Commodore!). The new release is said to be completely Workbench 2.0 compatible (I should hope so too), includes support for faster processors and will even allow the Amiga to directly read BBC and Archimedes diskettes within Amiga drives (on 3.5 inch disk, of course). The new Beeb emulator will set you back £40. Contact Commodore on 0628 770088.

SERIOUS PD
I'm always pleased to receive some new PD (hint, hint, all you PD suppliers), so you can imagine how overjoyed I was when a nice little batch of disks fell onto my doorstep early one morning.

They were sent to me by my old friend Tony Thompson, who many readers will probably know better as the main man at that well known PD house George Thomson Services (phone 077082 234). GTS specialises in utilities software, so I spent many a happy hour sifting through the disks for some decent software and I certainly wasn't disappointed.

Here's a quick run down of just one of the PD Packs that Tony sent me, namely *Disk Utilities vol 1* (it consists of two disks):

TrackDisplay – Does exactly as you'd expect. It displays a small strip along the top of the screen that displays the current tracks being accessed by any mounted floppy drives.
FastDisk 2 – Optimise your floppies to speed up directory and file loading.
TrackSalve – This patches the Amiga's trackdisk.device, adding several new features and fixing a couple of bugs that Commodore left in. Most notably, it can also turn off the annoying click that is present when a drive is empty.
SetNoClick – If *TrackSalve* is too heavy for you, then *SetNoClick* will let you turn off disk clicking in a jiffy.
FixDisk – If *Diskdoctor* throws in the towel, then let *FixDisk* have a go at rescuing data from any corrupted disks.
MenuWriter – Create bootblock menus for all your disks. Very good indeed.
Scrub – A floppy disk cleaning program that can automatically detect which drive the cleaner diskette is in.
AngusCopy – I don't know who the hell Angus is, but he's written a pretty decent disk copier. It doesn't handle protected disks, but then that's naughty anyway.

Jason Holborn

Archimedes

OLDIE BUT GOODIE
I've recently got into the habit of using a diary. It's not that my life is so action-packed that I can't remember which day it is, but simply that other people need to know where I am. *Timewatch* has come to the rescue.

This allows me to type in details of appointments, notes, and those annoying reminders of people's birthdays, the car tax renewal date and so on. My diary data file sits on a network where it can be accessed by anyone, so they can tell when I'm not going to be around.

Timewatch does a pretty good job of the basics, it works on the desktop, prints via the RISC OS drivers, and the display can be narrowed down to just appointments, or notes and reminders too. At the end of each day, I take home a printed sheet showing what I should be doing tomorrow. I'm beginning to like the system, despite the basic nature of the daily printout.

Timewatch costs £30 (rattlin' good value) from Mitre Software who can be contacted on 071-283 4646.

What I'd like to see from a future version of this software is encryption of the diary data and password protection (all as an option) – so that even on a network I could keep sections of my

diary private – and better printouts, using the pretty printing features of the 198 new Acorn printer drivers – bold, italic and so on – rather than the messy equals sign underlining of the current version. It could even have ready-made formats for personal organiser-size paper built-in. And what about a week-planner view on-screen that shows hours blocked off where appointments are already arranged?

TIFF BLUES (AND REDS AND GREENS)
As the screen shots in the last couple of issues of *Express* have shown, translation of Acorn sprites to TIFF format is still not yet perfect. How was it done?

Foster Findlay's *X Image*, a £10 program for the PC (VGA-equipped so it can't run under the PC Emulator) that can read Arc sprite files on MS-DOS disks and translate them into a variety of weird formats including TIFF, proved workable for 256-colour sprites and coped with a screen sprite from Fourth Dimension's saloon car racing game. But it did not take kindly to a mode 12 screen, resulting in the inverted palette effect visible in the screenshot in *Express 126*. All the resulting TIFFs were greyscaled; the colours of the original sprites were lost. And I couldn't

● This picture from the *Revelation* paint package comes to you copurtesy of a new compression package called *Creator*.

read the TIFFs back onto the Arc using *ChangeFSI*.

Not a perfect solution for TIFF, but it's still invaluable if you're working with satellite pictures, medical images and so on, because it copes with many specialised image formats. Foster Findlay is on 091-273 1111.

On the TIFF front, help is at hand. Many PD libraries offer a version of *MakeTIFF* and *MakeGIF* by John Kortink. But now a new version, *Creator*, merges the two, and allows you to specify the compression used for TIFF to none at all, 'Packbits' or the Lempel, Ziv Welch scheme. Packbits compression can be handled by most PC and Mac applications that import TIFFs. LZW is actually more efficient on most images but fewer programs can import the resulting TIFFs.

Creator is fast and it manages to retain the colour in a TIFF. My only gripe is that there's no way of setting up the default conversion; it always starts up with GIF selected. But I still strongly recommended it if you need to export any sprites from your system. The frog picture from Longman Logotron's *Revelation* painting package, was converted to a TIFF file with *Creator* before being imported into the Express Macintosh system for publication.

OTHER IMAGING NEWS

Colour Screen to Mac from Human Computer Interface, mentioned in *Express* 126, costs a steep £110. And the latest version of John Kortink's *Translator* utility for importing graphics files from other machines to the Arc (version 6.36) is much improved over the previous version I had.

"BE MY GUEST", SAYS SID

Acorn's Support Information Database is a mine of useful, free telesoftware. Unlike getting software from one of the many PD libraries, it's available instantly if you have a modem.

Up until now, much of the service has been available only to registered SID users, but Acorn has now opened up much more of the system to 'casual callers' in particular the telesoftware section. You can download the latest version 2 printer drivers, lots of games and demos and a vast selection of desktop utilities.

I log on to SID via its Micronet gateway (*SID#), and it took me a half hour phone call to download the latest versions of *ChangeFSI* and *Creator* (see below). Even if you take into account the phone charges and Micronet charges (a penny a minute at off-peak times), it's competitive with most PD disks. SID's guest access is on 0223-243642 (Prestel standards).

Arcterm 7 from The Serial Port

proves ideal for downloading telesoftware. It has all the file transfer protocols you could ever need, and multitasks on the desktop. As I write this, the last few bytes of *Creator* are pouring onto my hard disk, and I'll pause in a bit to log off.

PD SOURCE

How do you get things like *Creator*, the latest printer drivers or *C Library 3.66*? With Acorn software like the *C library*, your local dealer should be able to help. But sadly not all can, and SID, a bulletin board like the World of Cryton (0749-679794 or 670030, virtually any speed and 8N1), or a PD library is your best bet. If you've not made contact with a PD library, then here's a selection: I've no knowledge of most of them, and a couple might not still be operating. But a £1 coin sent will probably elicit a catalogue or demo disc. Most can supply files like *Creator*, *ChangeFSI* and so on. If you haven't got a modem, then get in touch with one of these chaps:

APDL, 96 Lanehouse Road, Thornaby, Cleveland TS17 8EA.

Arcaynia, PO Box 1927, Sutton Coldfield, B74 3QZ.

ArcPD, 279B Romford Road, Forest Gate, London E7 9H3.

Datafile PD, 22 Duxford Drive, Aldergrove, Co Antrim, Northern Ireland BT26.

Lings Software Services, Lings House, 26 Caxton Road, Wimbledon, London SW19 8SJ.

Mr Bee PD, 3 Willoughby Lane, Widmerpool, Notts, NG12 5PU.

Skyfall PD, PO Box 2220, Birmingham B43 5RZ. STWPD, 12 Mornington Road, Radlett, Herts WD7 7BL.

MONO MONITORS

The Arc 400 series is designed for use with colour monitors and two types of mono screens. If you want to use a Takan Viking, it can be plugged straight in. But a 'normal' mono monitor like the common Philips 7502 is more problematic; I hate to think how many have been taken back to dealers because they appear not to work.

The answer is fitting two little links inside the machine, on LK5 and LK6 Near the back. There are a couple of little plastic links spare on PL2 that can safely be used. Once the links are fitted, close up the machine and plug the monitor into the Sync socket.

Using a mono monitor is cheapskating a little, as RISC OS is definitely intended to be a colour system. But it does work in mono, and I would recommend you set a mono machine up with *Configure WimpMode 11. It looks a little better than the usual mode 12.

Ken Coumarin

64

QUAKING

Strange, isn't it? The software industry seems to be at its strongest for a long time with most arcade conversions actually being faithful to the original and a wealth of new and innovative games constantly pouring onto the scene. So why is it that in the past couple of months three of the UK's software houses have gone into receivership?

Activision had been a pillar of the software scene since... ooh... since I was a wee laddy, and both CRL and Hewson have contributed enormously to the success of the C64. What's more surprising is the fact that all of these companies were large and well established – lord only knows how terrified the smaller companies must be. With the recession and the increase in VAT things, it seems, can only get worse. Will there be any reputable software companies left in 18 months time? I'm sure Haydn would like your views on the subject.

CREATURES 2 EXCLUSIVE

Mournful rumbling aside, this week's column is dominated by the ever so cute and cuddly Fuzzy Wuzzies, as we take a look at what promises to be one of the year's better sequels, *Creatures 2* (cue rapturous applause).

The storyline is still in the planning stages but it should go something like this:

Clyde Radcliffe and his ladyfriend, Claudine, now have several little children after having declared their undying love for eachother at the end of *Creatures*. The evil demons which live on the other side of the island are back with a vengeance and are hell bent on wiping out Fuzzy Wuzzies once and for all. This time they capture Clive's children by posing as babysitters while Clyde and Claudine go off to a shindig (Fuzzy Wuzzies can never resist a good rave).

Since Clyde already knows his way around the island he has no reason to traverse the landscape again. Instead he heads straight for each new and cunning torture chamber to save his offspring from certain gory doom.

After each chamber Clyde enters a bonus phase in search of extra points, where he and a fellow Fuzzy attempt to save even more of their chums from a fate worse than deadlines.

MORE TORTURE

The guys responsible for the game are John and Steve Rowlands (PKA Apex Computer Productions) the pair with other classics such as *Scorpious*, *Cyberdyne Warrior*, *Retrograde* and, of course, the original *Creatures* below their belts. All these games were well received, so needless to say *Creatures 2* will be an overnight success.

The game was started in early February, just one month after the original was completed, and is due for release just after the CES show in September. The duo reckon that they will have a spectacular demo ready for the show.

Since the original game's torture scenes received so much praise, the Apex lads have decided the sequel should consist entirely of such screens (squeamish people stay clear)..

"They were an instant crowd puller," boasts John. "We've dropped the scrolling sections because they weren't really appealing. Solid torture scenes should provide great entertainment."

INSPIRATION

Inspiration comes from all manner of places, the *Penelope Pitstop* cartoons in particular, as well as Apex's rather sick sense of humour. Unlike the original, extra weapons and enhancements will be collected during the actual torture screen and for once the guys have decided not to include a shop (shock horror).

Similar to *Creatures* certain weapons will be essential to your survival; others will just look very pretty.

Once a screen has been successfully completed there follows a frantically paced bonus stage loosely based on a prehistoric game called *Clowns* – anyone remember it? Here masses of points can be accumulated not to mention the odd extra life.

The graphic style of each torture screen (and its associated bonus screen) varies from level to level and fans of *Creatures* will no doubt spot a few familiar names in there (Lilly Lakes and Watery Falls, for instance). And, needless to say, there will be plenty of funky tunes to accompany the action. Steve is a truly prolific musician.

Also included is a neat 'Get Ready' section, complete with dancing Fuzzies and a brilliant well done screen.

ATTENTION TO DETAIL

The game is being created in reverse, in that the front end code (title screen, high scores, loading systems etc) has already been written, allowing the duo to concentrate on writing torture scenes right up to the completion date.

"We aim to spend up to two weeks on each torture screen," John told me, "with the second week being a tidying up period."

Apex runs a very efficient team with John slaving away at the code and Steve tackling the graphics, music and sound effects, and occasionally sleeping. At this rate there should be no problem in completing the planned 15 torture screens.
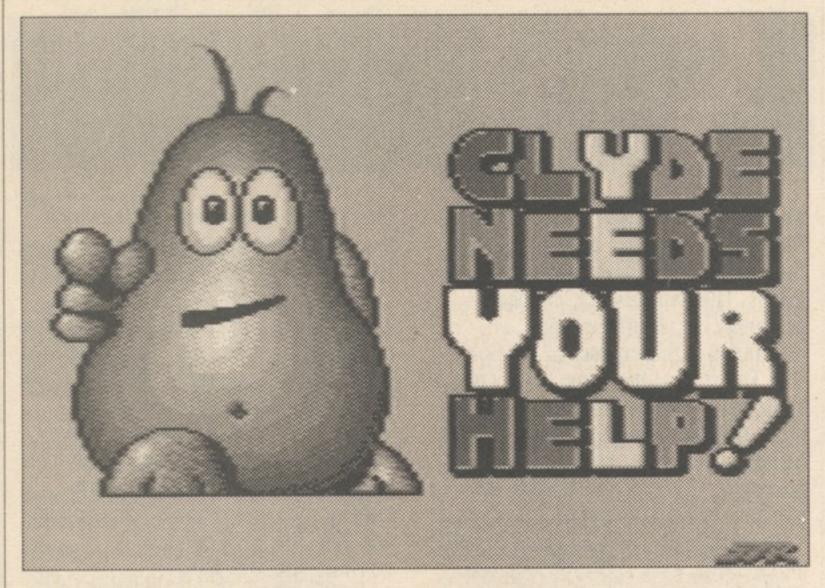
"Thalamus originally wanted seven screens, but we can confidently tackle 15 or so. It's really just a case of how much time we have," says John.

The design and presentation is where the team excels. *Creatures* was faultless in this respect with every idea being meticulously implemented. The graphics for the first two screen have already been finished, and only the code is required to bring them magically to life (but Apex will give nothing away at the moment).

BONUS BELTER

I have seen the bonus game, though, and what a belter it is. The concept is easy to grasp; a demon at the top of the screen pushes helpless fuzzies off a

• *Creatures 2* is set to be a C64 smash this coming Christmas. As the torture scenes in the original were so popular the authors promise many more of them in the sequel.

ledge (boo, hiss). Clyde and a friend have an ACME trampoline between them and they must bounce the falling Fuzzies to safety. There is a quota of Fuzzies to be saved, with vast amounts of points awarded if you are successful. The graphics and presentation are first class as is the bouncy music. It was a demo I saw, so the in terms of playability it still needed a bit of a tweak, but in all it's great fun.

RECOMMENDED PD
Finally this week, I've been delving into the world of Public Domain software for the C64, and am shocked by the lack of it. It seems that the scene collapsed just as the 16-bit machines took a grip on the market, but slowly the demos are re-appearing. Thanks to Binary Zone PD I've had a chance to look at some of the

hottest productions around.
Brutal 3 is by far the best program (technically) ever to grace the C64; solid 3-D and wideframe vector graphics as fast as any Amiga, plus a breathtaking realtime zoom all of which move slickly in and out of the borders.
Other favourites include *Bestiality*, a jukebox containing the music from *Shadow of the Beast* (along with sampled speech from *The Mary Whitehouse Experience*) and *Wild At Heart*, a stunning eight part demo with some fabulous sonics.
Treat your C64, and send an SAE to Binary Zone PD, 153 Farriers Corner, Westlands, Droitwich, Worcs, WR9 9EX. And if there are any other PD libraries for the C64 out there, don't waste this opportunity to get in touch.

Andrew Roberts

Spectrum

SPECCY RULES, OK
We're constantly being told how humble the Speccy is by all these smug ST, Amiga and PC owning types so here's an interesting fact you should memorise for next time the boring fops assail you on the street and start babbling on about megabytes, blitters and the, ahem, 'lifelike graphics' on the batch of dodgy PD disks they've just received from Sweden.
The best selling game across all formats last year was the *Spectrum* version of *Teenage Mutant Hero Turtles*! So nyah, nyah, nyah, nyah, nyah and ya boo sucks to everyone who criticises our rubber keyed buddy. It's still the people's choice and deserves more support from software houses in the form of quality software of all types. They might not be able to charge us £30 and get away it like they can with the 16 bities but this is clear proof that well written, good quality software (like the *Turtles* game) will always be bought in vast quantity by slavering hordes of Speccy owning punters.
The pretty reasonable price of Spectrum stuff seems to reduce piracy as well in my experience. If we could just have a bit more variation with the odd new art package and more original unlicensed games I'd be even happier.

But basically I'm happy to report that it looks like the demise of the Spectrum has been greatly exaggerated.

UNIDOS
The Plus D disk drive/interface system is thought by many to be the best way of introducing your Spectrum to the wonders of a 3.5 inch disk drive. I don't own one myself but people who do keep telling me how good they are and I'll definitely be mentioning it to Santa come Christmas. I bring the subject up now because of a brightly glowing recommendation sent to me by Malcolm Perry for a new disk operating system written for the Plus D and it's predecessor the Disciple.
UNI-DOS from SD software, of whom, I must admit, I haven't heard before, is designed specifically for these systems and according to Malcolm the "functions and facilities it offers make a world of difference."
With UNI-DOS you have to replace the ROM in your Plus D/Disciple but Malcolm assures me it's all very straight forward and definitely worth the trouble for the impressive benefits you gain. Firstly there's an improved screen dump feature that's an absolute boon for Desk Top Publishing (DTP) as you can select any section of the screen and print it

out in any size, upright or on its side and even in colour if your printer's up to it. File handling is also pretty advanced with "the multiple directory almost worth the money alone," says Malcom.

He goes on to enthuse that, "You can now open channels direct to disk and POINT to any place in the channel. Disk data can be read directly into a string variable (as can data from any channel). Any number or even a single byte can be read from or written to the disk without all the hassle of the old system of lifting sectors and resaving sectors on disk."

Other new commands included in UNI-DOS are PEEK@, to compliment the original POKE@, OPEN and CLOSE streams and channels and MOVE which replaces COPY in the standard Plus D/Disciple GDOS. That's as well as random access files, drive maps and other tasty sounding features. In fact, Malcom compares UNI-DOS to the acclaimed Master DOS for the SAM and this new operating system does seem a veritable boon for all Speccy/+D households. I'd give you an address for SD Software but Malcom didn't include one! Write in if you know where they can be found.

SPINDIZZY POKE

We're all Your Sinclair fans around here (aren't we?) and so an atmosphere of universal jubilation should welcome this poke for a game slapped on the cover of the April issue of Britain's best selling Speccy mag. It gives you unlimited time on the excellent Spindizzy and was

kindly supplied by Matthew Wilson of Brighton. Thanks Matthew, you're a true Spec-chum!

He also wanted to know if a SAM bought from a shop would be under guarantee by SAM Co, to which I can unofficially answer, almost definitely yes. Anyway, to get the poke working simply:
1) Type it in.
2) Save the program for posterity.
3) RUN it and start your Spindizzy tape from the beginning and don't don't stop it until the game has loaded.
Infinite time and large scores will now be yours.

```
1 REM Spindizzy Hack
10 CLEAR 24831: LOAD
""SCREEN$: LOAD "" CODE
20 FOR a=65309 TO 65321
21 READ v: POKE a,v
22 NEXT a
30 POKE 65141,154
40 POKE 65148,29
50 POKE 65149,255
60 RANDOMIZE USR 65118
100 DATA 62, 201, 50, 144
110 DATA 188, 62, 201, 50
120 DATA 17, 189, 195, 0
130 DATA 178
```

Contributions of a Speccy related nature are still as welcome as ever! Send everything and anything to Robin Alway, Spectrum Column, New Computer Express, 30 Monmouth Street, Bath BA1 2BW. Ta.

Robin Alway

ST

AN ISLAND NATION?

After what seems like an eternity, The Secret of Monkey Island has arrived on the ST. The game, which has been written by Lucasfilms, is being distributed in this country by US Gold.

The style of the game is very much in the same vein as other Lucasfilm titles such as Indianna Jones and Loom, namely a graphical, point and click adventure. To complete Monkey Island, you have to take control of a character called Bobbrush Threepwood, turn him into a pirate, save your true love and defeat the evil pirate LeChuck.

An amusing introductory sequence brings home the point that this is no deadpan adventure full of goblins and willo-the-wisp type spectres. No, this is a true interactive movie, with more than its fair share of humour.

The game is split into three main parts. The first of these involves you becoming a pirate. Some particularly old and grog-wizzened pirate chiefs set you three tasks, to prove that you have what takes to make it in the cut-throat world of piracy. You have to steal an idol, beat the sword-master and find the treasure of Melee island.

The most amusing event in the first stage is beating the sword-master. To do this you have to acquire a sword and

then gain the experience necessary to take on the old-master. Thus sword fights aplenty take place, but not your common-or-garden sword fight. The idea of these battles is to out-insult your opponent. So if he says "You make me want to puke," you reply with "You make me feel like someone already has."

Nothing is what it seems on the island of Melee. The treasure is no trove of golden goodies, the pirates are cheeky sods who enjoy winding you up and even the dogs can hold a conversation with you!

Stage Two sees you setting off to the island to confront the evil pirate LeChuck with your massive crew of three. Here again things don't go very smoothly, the crew are far more intent on putting their feet up and cruising around the Caribbean than they are on confronting evil pirates.

Thus you'll have to do battle with the crew's egos, while at the same time trying to find Monkey Island. Believe me it's not easy. If you do manage to overcome the crew's "hostile" spirit you can attempt to rescue your sweet heart and return to Melee a hero and a true pirate in Stage Three.

Outstanding graphics and extremely tongue in cheek humour place this game light years ahead of any

other graphic adventure. The control method is unobtrusive and truly intuitive. Considerable time has been spent on little touches and gob-smacking graphics. *Monkey Island* from US Gold is a true joy. It should hit the shelves within the next months.

EVENLODE OFFLOAD SOFTWARE
Things are rarely quiet at Evenlode Soundworks. As distributor of the Steinberg range of software, it always has something new in the pipeline for MIDI manipulating ST users. True to form a whole batch of new programs is now available from the company.

The most interesting of these, is definitely *Avalon 2.0*. This professional package is a sample processor. It enables you to either create sounds from scratch or to modify existing samples. The program incorporates a SCSI interface as well as facilities for full time correction.

Synthworks Wavestation is one of Steinberg's famous front end synth editors. It enables the frustrated musician to access the deepest recesses of his or her synth via a friendly ST program. Korg's *Wavestation* has just had the Synthwork's treatment and is easily on a par with the models. In a similar vein is *ADS Soundworks*, an editor for Dynachords sampler.

Two new hardware products aimed at the ST MIDI market have been released. The first of these is SMP 11, a rack mount SMPTE processor. This enables you to sync music to vision via SMPTE codes and is 25 per cent

cheaper than the SMP24 model. The other hardware device is the VLTC 1 rack mount video synchroniser which includes VITC read/write facilities.

AN ALL NEW SYSTEM SOLUTION
There's a new force in British ST software and hardware distribution, ready to do battle with the big boys. System Solutions aims to address the professional side of Atari usage, namely ST, STE and TT. The company tells me that it has a portfolio of new and exclusive packages ready to retail. Users of MIDI and DTP programs will find that System Solution has some very nifty items in its catalogue.
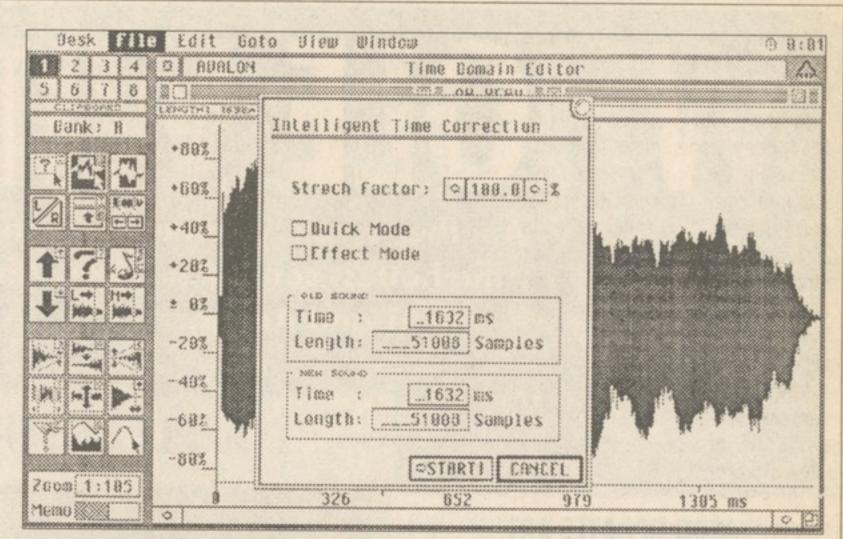
Codehead Software has appointed System Solutions as its British distributor. *Maxifile 3.1*, *Hotwire 3.0*, *Codekeys* and *Poppit* are four of the Codehead programs now available.

Maxifile is a file handling tool. It displays up to 48 files at a time and enables you to erase, move, copy, name, show, printer, search, set archives and fastload programs, thereby making desktop largely redundant.

Codekeys is a macro program. It enables you to assign "hot keys" to a wide variety of functions. For example, you could set a macro to run a word processor, then load a text file and then find a particular spot in the text.

Lookit is an ASCII file view and binary file editor which is memory resident, while *Poppit* lets you to open desk accessories from within any program.

Hotwire is similar to *Codekeys*,

except that it runs programs. Menus can be created with each program having its own hot key. Accessories can be assigned to these hot keys and everything can be password protected, giving added ST security.

System Solutions will be selling the Ethernet network called Bionet 100, which lets you to link STs up with PC's and Mac's. The network runs at 100 megabits per second, making it extremely fast; it also supports a wide range of file servers including Vax's 286, and 386 PC's, Unix and Atari ST and TT computers.

Calamus DTP users will be interested in the company's library of 90 fonts. These have been designed by the Canadian company Cherry Fonts and

come complete with a font editor to enable you to get text looking just the way you want it.

Titan Design's Reflex graphics card is being distributed by SS, as is Logitech's ScanMan Plus hand scanner. The German company Trade It has appointed SS as the British distributor of its professional *Repro Studio*, *Repro Studio Plus*, *Repro Studio Professional*, *Avant Vector* and *Avant Vector Plot* packages, while TKR has given distribution rights to SS for its ST Fax Modem hardware.

System Solutions lives at Atari Workshop Mail Order, Windsor Business Centre, Vansittart Estate, Windsor SL4 1SE. Telephone 0753 832212.

Andy Hutchinson

• With the Steinberg Avalon you can create new sounds or modify existing ones.

WHOLE WIRED WORLD

Another week, another plane ticket. Steve Gold wanders the globe in search of the hottest computer news. Among other things this week: new products for the ST and Amiga.

APPLE UNVEILS IIE EMULATOR FOR MAC LC SERIES

• *The Mac LC: new Apple II emulator is the equivalent to running BBC Master software.*

Apple US has begun shipping an Apple IIe machine on a card designed to fit into the Mac LC computer. The $199 card, which was announced in the US when the trio of budget Macs were unveiled last October, is pitched at the educational market in the US, where the Apple II series is what the BBC Model B is to education this side of the Atlantic.

Apple claims that, because the board contains a 65C02 microprocessor, it is virtually an Apple IIe "computer on a card". The card will run most existing Apple IIe programs faster and with better resolution than a regular IIe.

The card comes with 128K of onboard RAM - which can be allied to up to 1Mb of the Mac LC's main memory - and features a floppy disk controller and connector ports, so allowing onward connection to IIe peripherals such as drives and joysticks. The card slips into the processor direct slot (PDS) on the Mac LC's motherboard. Contact: Apple Computer, 20525 Mariani Ave, Cupertino, CA 95014, US. Tel: 0101-408-996-1010

ASDG UPDATES ART DEPARTMENT PROFESSIONAL

ASDG has released a number of a new and updated packages for the Amiga.

Spearheading the new product range is a major update of the company's *Art Department* package. The upgrade software is called *Art Department Professional*.

A key feature of the new package is that it now supports a large number of colour peripherals, including the Impulse Firecracker 24 and PP&S Framegrabber systems. Other features include support for new file formats and image processing systems.

For information on *Art Department Professional* contact: Gina Cerniglia at ASDG Inc, 925 Stewart Street, Madison, WI 53713, US.Tel: 0101-608-273-6585.

DOUBLE CLICK UNVEILS DC SHOWER

Double Click software, the developers of *DC Showit*, the shareware package, for the Atari ST, has revamped the software for the commercial marketplace and called it *DC Shower*.

The new software replaces the Gem desktop Show File function with up to seven *DC Shower* modules. These are said to allow the user to view text files, binary files, 17 different picture formats. It even provides the ability to extract ARC, LZH, ZIP and ZOO archives,or so the company claims.

The package can be used as a standalone module using the UIS 3.3 facility on the Gem desktop - you drag a file to the P button and click on the show button.

The *DC Shower* software is all set to start shipping from the end of April onwards. It will retail for the price of $29.95. As a special deal to people who already own the orginal, the upgrade is being offered at one third off by direct mail, provided you send in a disk with a copy of the shareware *DC Shower* package on it, before the beginning of June.

For more information you can contact the company at the following address: Double Click Software, PO Box 741206, Houston, TX 77274. United States.Tel: 0101-713-977-6520 BBS: 0101-713-944-0108.
Email: Compuserve 75300,577
Usenet: uace0@menudo.uh.edu.

ONLINE HELP FOR *CALAMUS* USERS

Users of the much vaunted *Calamus* dektop publishing software for the Atari ST find that, while the software is excellent in the quality of end-result it is able to produce, actually getting to that point is sometimes mind-bending because many of its features are quite complex.

Now Spar Systems of New York has released a $34.95 package called *Calassistant* that operates as an 'on-line assistant' to users of the package.

According to Spar, the package allows *Calamus* users to file their manuals away, as help is just a mouse click away, the company claims.

In use, the package operates as a TSR, requiring just 90K of RAM to run in over the *Calamus* software. The software uses text, icons and pictures to illustrate, explain and give tips for commands and functions step by step. Since the *Calamus* interface is very icon oriented, the 'help messages' function under the 'extras' menu is used to navigate the user online.

Further details from: Spar Systems, 381 Autumn Avenue, 381 Autumn Avenue, Brooklyn, New York NY 11208, United States.
Tel: 0101-718-235-3169.

INTERACTIVE CD MAGAZINE LAUNCHED

A new publisher called Verbum has announced a CD-based magazine called *Verbum Interactive 1.0*.

The first issue of the quarterly magazine - which is available now - consists of two disks plus driver software the the Apple Mac. MS-DOS driver software will be available later in the year, company. officials have said.

It's worth noting, of course, that almost any CD-ROM drive driver software can access the new magazine disks. Verbum is including the driver software with its $49.95 per issue magazine to ensure that novice users of CD-ROM drives can read the disks.

The first issue of *Verbum Interactive 1.0* features a showcase of animation and interactive multimedia works, interactive columns and feature stories, with music from popular musicians Todd Rundgren (*A wizard, a true star! – Ed*) and Graham Nash, and several other well-known electronic music composers.

Plans call for the CD-based magazine to be issued on quarterly basis. A full subscription service is expected to later this year, at which time specific software drivers for hardware systems other than the Mac will be launched.

For further information on the magazine contact publisher Verbum on 0101-619-233-9977. ■

BLACKJACK FOR THE ATARI ST UNVEILED

Musicode Software has unveiled *Blackjack Plus 3*, a games package for the Atari ST range of computers. According to the company, the $89-95 package features realistic casino play and another three play modes which include programmable strategies.

The La Mesa, California-based Musicode software claims that, as well as entertaining users of the ST, the package will actually teach players how to win at Blackjack in the real world - a chance to claw back the cost of the package perhaps?

In use, the package supports between one and seven players, playing with up to nine decks of cards, with nice touches such as being able to specify the deck dealing depth for when to shuffle, and an adjustable playing speed setting.

On a personal note, one nice feature of *Blackjack Plus* is the ability to lower or eliminate the casino's odds at winning. This, the company claims, allows you to see why you lost and, perhaps, win the next time around.

Further details: Musicode Software, 5575 Baltimore Drive, Suite 105-127, La Mesa, CA 91942, U S. Tel: 0101-619-469-7194.

• *ST = Stick or twist? We call it pontoon and they call it blackjack.*

CIRCUIT CITY

If you've built an electronic kit and it won't work you could be in trouble. Keith Pomfret tries out a service that turns tragedy into triumph.

Most of the simpler projects we have covered in Circuit City are easy to troubleshoot if they won't work. If there are only a couple of dozen components, the checks for dry joints, bad connections and bits fitted incorrectly are quite simple. If it is a mega-project like last week's NICAM stereo decoder for the TV though, there are a lot of closely packed parts and even with meters, scopes and plenty of midnight oil, it can be a task that won't suit the faint hearted.

Electronic hobbyist's friend – Maplin – which makes the NICAM kit, offers a full diagnostic and repair service to anyone who is having problems with a Maplin kit. For a very reasonable fee they'll take your kit, find out what you've done wrong, remedy it and return it to you with a list of your cock-ups.

If the kit is beyond salvation, they won't be able to resurrect it, but in most cases, it is a few simple mistakes that can make an otherwise perfect project fail. The ideal situation, though, is to avoid needing to send your pet project off for repair. Common sense, care and a few rules to follow when constructing your kit can help you avoid needing the service.

Before you embark on any project there are a few simple rules to follow. These will help yo ensure that your project is well made and less likely to need troubleshooting. Maplin charges vary depending on the amount of work to do, so care in construction can save you money

PRECAUTIONS

Some components are sensitive about which way you place them in a circuit and can be damaged if placed in the wrong way round. Other components such as diodes are designed to inhibit the flow of current in one direction while allowing it to go the other way. Putting a diode in backwards has the potential for at least stopping anything happening, and at worst, allowing delicate components to be damaged.

Resistors inhibit the flow of current through a circuit and if the wrong values are used, too little or too much can get through. If too little power gets through, the circuit may fail. If too much gets through, components that are sensitive may be damaged.

The values of resistors shown in a circuit should be rigidly adhered to. If you can't get a resistor of the value shown in the circuit, it may be possible to make up the necessary resistance using more than one resistor. If this isn't possible and you have a choice of a resistor with a smaller and a larger value than the one specified, the one with the higher value will have more resistance and be a safer bet. This may not work, but nor will it harm the machine.

THE SERVICE

When we built the Maplin NICAM stereo decoder, a shortage of time and a fast soldering iron proved that in all Circuit City projects, more haste means less speed. The finished unit looked pretty enough and we were able to photograph it, respendent in its glory but when we plugged it in, it gave neither a picture or a sound.

Back to the drawing board (or at least the circuit diagram). After a couple of hours pulling out hair, teeth and other bodily parts not firmly attached, we decided to cheat. Perhaps cheat is not the right word. After all, we had promised a hands-on test of the Maplin fix-it-and-fettle-it service. A phone call to Maplin confirmed that it would be glad to have one of its service staff run over the completed kit, fix whatever was necessary and provide us with a service report.

Most important to us was another approaching deadline and Maplin promised to turn it round and send it back within seven days. While Maplin cannot promise this speed of service every time, it always tries to repair and return people's projects promptly.

Seven days passed before it was back on the Circuit City Testbench. It was carefully wrapped, thus protected from the vagaries of the Post Office, British Railways and the elements. In the box was a copy of the letter that we sent, a compliment slip and most important a copy of the engineer's report appended to the invoice.

The engineers report was a clear and concise tabu-

lated listing of what was wrong, why it was wrong and how it was remedied (see panel above).
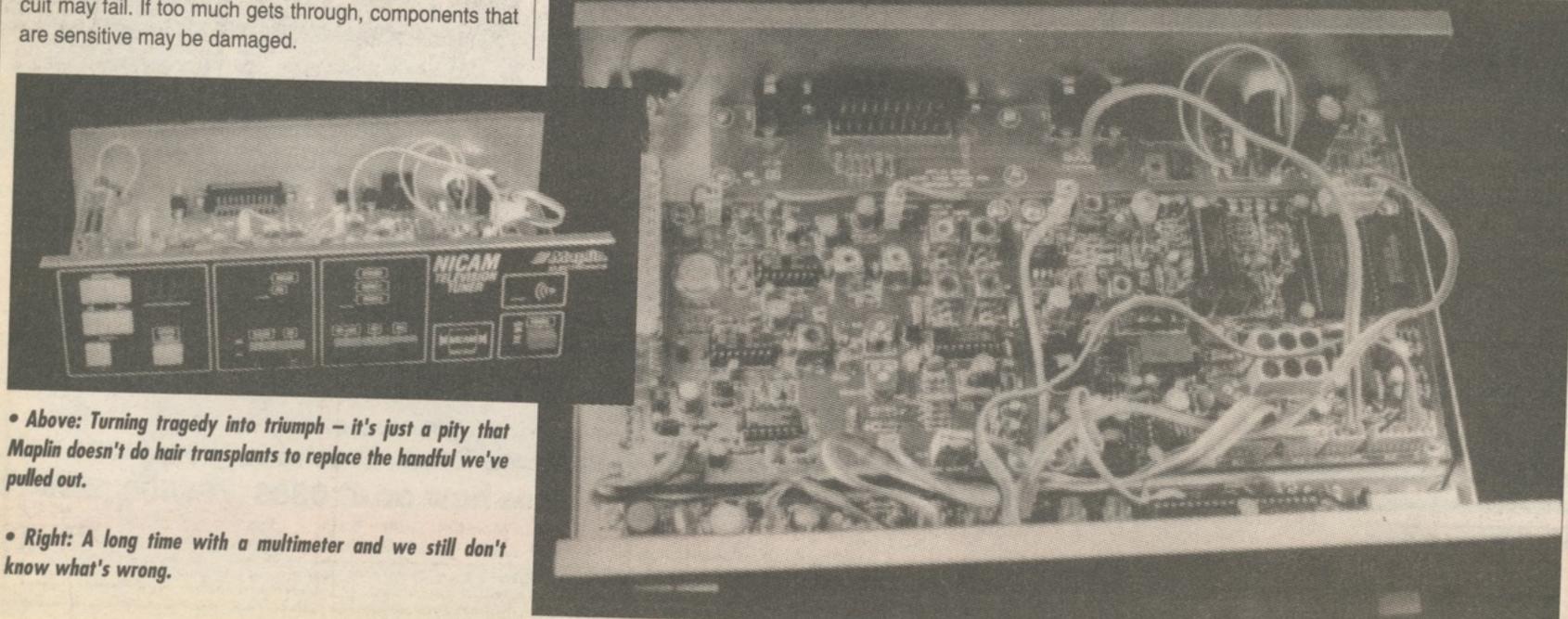
This concise report clearly showed us where we'd gone wrong and made the analysis of the mistakes that we'd made simple

As well as meaning that the money spent on a kit isn't wasted, the diagnostic and repair service meant we would be better prepared for future projects and would already have an indication of the kind of mistakes that we're likely to make.

The report/invoice has sections for components used and time taken and in this instance, a couple of hours (at a very reasonable £12.50 per hour) put a time charge of £25 on the job. This is extremely good value for diagnostic fault finding and repair and a chat to Maplin confirmed that it was indicative of the sort of repair needed to this kind of project.

Normally, Maplin would send out the invoice for service and the engineers report and return the working kit to you on receipt of the remittance. We spoke to other hobbyists who had used the service and all agreed that it is a good service that solves problems and in doing so, gives you the information to learn from your mistakes. This helps your skill for future projects. In short, good value and an excellent service.

• Above: Turning tragedy into triumph – it's just a pity that Maplin doesn't do hair transplants to replace the handful we've pulled out.

• Right: A long time with a multimeter and we still don't know what's wrong.

◆ FOR SALE

SPECTRUM 128+2, 2 joysticks, all leads, manuals etc. Many games worth £1000+, offers? (0332) 810153 evenings. (Alan) or write to, 12 Delven Lane, Castle Donington, Derby, DE7 2LJ.

SPECTRUM 128K, Modem Interface 1, Mega Drives, Interface 2, Kempston Interface, Mags, ZX paper rolls. Box of games, Simcity, Vulcan, Dominator. Multiface 128, £200. Will separate. Also some books. Tel: 0223 872492.

ATARI STFM, upgraded to one meg. External disk drive. 300 disks. Master Sound, Timeworks, S.T.A.C. Talespin, Dungeon Master, Chaos, Home Accounts, P.D., Demos, games, mouse mat. £350. Tel: 0785 49332.

MEGADRIVE, plus five cartridges, £130. Wanted Neo-Geo games. Amiga penpals wanted, also Electron, plus one Interface. £20. Video Signal Stabilizer wanted. Will swap any above. Thanx. (Steve). Phone (0628) 72275.

STE 4MEG, clock, Nakshka, Syncro, Triangle, 1 meg ext, colour T.V. 300+ disks. Mainly menus, serious, magazines. Approximately 120. £535 o.v.n.o. Phone after 7pm. John 0202 420682. Buyer collects.

LAPTOP Tandy 102, built in modem. Spreadsheet on ROM, software, manuals etc including D.M.P., 105 printer. See Tandy Cat for full details. Ring Frank. 0296 88190, evenings. £275 including carrycase.

MIDI compatible electronic keyboard, 10 note Polyphonic, 210 Sound Dual Tone Mixing, Percussion, Record Feature, Model Concertmate 1000. As new, complete with leads, boxed. £50 + postage. Phone, 0709 370149.

BBC B 32K, complete with tape recorder, radio shack TRS 80 printer. Trolley connecting leads and over 70 Educational/Leisure programs. Ideal for first computer. Excellent condition. Offers around £275. Tel: 0742 848653.

AMIGA P.D.'s, only 30p per disk. Please send a SAE to, P.J. Demos, 63 Park Lane East, Anlaby Park, Hull, HU4 6TW.

SPECTRUM +3 P.S.U. and all leads inc. Tape, lead, lots of games on disk, and tape also magazines, very good condition. Phone Ben on: Harrogate 0423 885184 after 6pm.

ATARI G5XE P.S.U. Datacorder and all leads. Loads of games and magazines, very good condition. Phone Ben on: Harrogate 0423 885184 after 6pm.

ATARI XE games for sale. 20 games and 5 cartridges. For full list, send 50p to, Tsoek Yin Cheung, 16 High Street, Grimethorpe, Barnsley, S. Yorkshire, S72 7LS.

INKJET portable, 80 col, 12Jet NLQ. IBM and Epson modes. As new, Cost £300+. Will sell for £130. This printer does 192DPI and 150CPS. Battery or mains. Ring David 0934 513086.

AMIGA 1/2 meg upgrade, (Evesham) with clock and on/off switch. Perfect. £25 o.n.o. or exchange for Sound

Sampler, hardware and software for Amiga, or external drive for Amiga. 091 2656523.

ATARI 520 STFM, still guaranteed, £800+ worth of games, including Midwinter Simcity, Xenon 2, Operation Stealth, joystick and Art packages. Worth £1000+, sell for £400. Tel Leicester. 0533 433319.

COMMODORE 64C, very good condition, with Ligh Gun, joystick and 40 top games, £100+. Will sell separately. Also Speccv 48 with games and tapedeck 0564-772903 evenings.

FOR SALE, Amiga Bingo program. Full speech number callout. Number checker. Board printer, include free copy of Maniac Bingo. A bargain at only, £2.50. D. Brown, 2 Ashfield Grove, North Sheilds, Tyneside.

AMIGA games. All originals and boxed. Projectyle, Immortal, Imperium, Elite, Anarchy, Terropads, Infestation, Robot Monsters, Star Flight, F29, World Cup, Ballistix: All £11.00 each, inc p+p. Tel: (0908) 665465 eves.

SEGA MEGADRIVE (PAL) with four games, inc Hellfire, World Football etc. Worth £300. Sell for £180. Tel: (Alan) 0698 817211 after 4.

VIGLEN GENIE IBM at compatible 40Mb, HD, 1.44Mb, FDD, VGA monitor. 1Mb, RAM, lots of software, only six months old £650. 081 504 2938 anytime.

DISCO! Two Citronic performer record decks, Vivanco stereo mixer, (and a Citizen 120D+). To sell or swap the lot for Hewlett packard deskjet 500. Ring Colin (091) 4897019.

AMIGA 500, eight months old, exquisite condition, BBC Emulator, Star War, Deluxe Paint II, plus two joysticks and many more, ask for details. Phone Phillip 051 327 1638 not Tuesday.

AMIGA Screen GEMS, new, boxed, Zipstick joystick, Leisure Suit, Larry III, Treble Champions, Scart, cable, dust cover and much more! Asking £370 the lot! Phone rats on 0274 545690 evenings.

BBC B, cassette deck, joysticks, with loads of software. Titles include Summer Olympiad, Barbarian, Yie-Ar, Star Wars. Superb condition. Only £110 o.n.o. Phone Paul 071 328 7598 (weekends).

MEGADRIVE, one week old, two games £120. PC Engine 17 games, joystick, booster, magazines £400. Ghost and Goblins arcade, everything boxed. Matt 021 743 4863.

Z88 PC2 LINK, BBC link, adaptor, printer cable, case. Eproms RAM packs, manual, all cables, disks, manuals, for use with. Swap for STE, Amiga etc. All unused. Chris. Tel. 0792 467415.

ST originals, Xenonorph, Falcon, Gravity, Galdregeons, Domain, Guild Of Theives £5 each. Ring Chris, Bath 337403 evening or at work 462090.

Z88 as new, used once. Includes carrycase, P.S.U. and printer lead £125 o.n.o. John 081566 3639 (West London).

AMIGA magazine back issues. Amiga Format, Amiga Computing, Amiga User International, Amiga world. 2-3 years worth. Including disks £20. Buyer collects. Phone Richard Gravesend (0474) 534510.

ALL AMSTRAD PCW magazines - your Amstrad/ 8000 plus etc, from 1987 to June 1990. For sale ring for details. 09592 2714 (Sevenoaks area).

PAGESTREAM for Atari. Top DTP. 4 months old, original, £85 (cost £150). 1st word plus, latest version £30. STE upgrade to IMb. 512K Simms Chips. Solderless, £20. 078 139 3971.

SPECTRUM 128+2 joysticks, interfaces, 150 pounds woth of games. £125 o.n.o. Ask for Mark.

PRIVATE SALE of PC bits, +books, +software. All very cheap. Send SASE for full list: Peter Hunter, 2 Mayes Close, Norwich, NR5 9AR.

IBM compatible printer C. Itom 310 very fast 300/50/33 CPS configures to IBM PC Apple Macintosh software retails £560 serious offers please. Consider exchamge for Star LC24-200 colour. Phone Dave 0795476339 evenings.

BROTHER M1109 printer, boxed needs slight attention, hence price £50. Buyer pays poastage. Phone (0542) 35520, Ask for John.

YAMAHA keyboard. Portatone PSR 36, £200. Telephone Graham on 0245 350708.

SEGA MASTER system plus. With gun, 3 games, various magazines, bargain price £100 the lot. Tel: Chris (0384) 396807. (Buyer must be around the Midlands).

FREE ST disk magazine! Send a blank disk and an SAE for your copy of Sten 3, The St enthusiasts' newsletter. John Weller, 49 Haylett Gardens, Surbiton Crescent, Kingston, Surrey, KTI 2ER.

TYPECAST PDL for Atari ST/STE. DTP, WP, Art and Clip Art only.Catalogue issue 2.1 out now. Send disk + SAE, typecast PDL. 31 Hartfield Crescent, West Wickham, Kent, BR4 9DW.

SEGA MEGADRIVE (UK version, still under warranty), colour monitor, two games, Japanese converter £250. Tel 081 966 2301. (Durng Daytime) and ask for Mr. Taylor.

ATARI 520 STFM, condition as new. £950 of software. Titles: Xenon 2, Robocop, 1st Word, STOS, Paintpot, joystick, mouse, blank disks + Amstrad DMP3160 Dot Matrix printer, £350 o.n.o. 081 858 1758 evenings.

CBM 64 excellerator 51/4 drive, boxed as new £60. Lots of original CBM64 and Amiga software for sale. For a list. Phone 0908 660453 and ask for Paul. No reasonable offers refused.

COMMODORE A501 Amiga RAM upgrade with clock £30. Aztec "C" V3.GA boxed with manual £90. Tel: 021 552 9839 after 6pm.

AMSTRAD PPC512 double drive 640K memory carrying case, manuals, including carriage £345. Phone 0953 882197.

AMIGA software edition one compilation £9, Dakkhen, Treble Champions £6 each. All boxed. Back issues N.C.E., Amiga user, Amiga computing etc. 65p - 110p includes postage. 0703 676949 after 7pm.

MSX PANASONIC computer and Toshiba music keyboard HX-MU901 with FM synthesizer unit. All boxed as new, with manuals £75. Tel: 071 481 3696.

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magazines, mouse mat etc. All very good condition. Only £300 o.n.o. Tel:: Coventry (0203) 418148.

AMSTRAD CPC 464 with green monitor with MP 2 colour modulator plus 89 games, including Wec Lemans + Robocop plus Target Renegade + two joysticks excellent condition for only £180.Tel: (0924) 469367.

FOR SALE: Amiga class of the 90's pack £450. A590 20Mb hard disk drive £200. Both unused, unwanted prize. Phone Richard. Gravesend (0474) 534510.

BALLARENA ROTOR Nevryon Inertia Archimedes £10 each, or swap for PRM's. Kings Quest I-III, £25 (PC). Mog, 12 Llwyn Berry, Georgetown, Merthyr Tydfil, Mid-Glam. CF48 1DB.

720K disk drives only £35 inc p+p black, bare mechanism in very good condition. Standard Shugart Interface suits BBC or IBM compatible. Phone 0254 692011 (evenings)

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VIEWDATA Sysops, send details of your boards to be included in a new directory , to. Viewdata Directory, 56 Aldham House Lane, Wombwell, Barnsley, South Yorkshire, S73 8RG.

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WANTED Amiga A500 +1/2 meg, 2nd drive, will swap new mega drive +10 games or sell £350. Offers welcome! Please ring Steven on: (0924) 407919. (day) 402430 (night).

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ANY Amiga software companies wanta good graphics artist to help with games, then phone:0705 256778 ask for Alan.

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HELP! If you can program in 6800, or can draw or make music, send a SAE and sample of your work to me: I am forming a PD programming group. Write to S. Moons, 1 Tye Gardens, Grange Park, Swindon, Wiltshire, SN5 6ES.

GENIUS Technophilic Fanatics with Pseuedonxms: Cyberpunks Coders etc unite, drop me a line: JLH, 3 Renton Avenue, Guiseley, Leeds, CS20 8EE.

`THANKS` to the APC PD club, for Colossal Cave. Rory W.

VIEWDATA Sysops, send details of your boards to be included in a new directory to Viewdata Directory, 56 Aldham House Lane, Wombwell, Barnsley, South Yorkshire S73 8RG.

WANTED, information on RGB data display model, no CC1422, also colour graphics enhancer CGE 350 HR manufact supplier. Phone 092575 8477 will pay.

MEGADRIVE swap your games through our National service, meet local owners. Send SAE £3 for six months membership. Megadrive Club Laurel Bank, Arthington Lane, Pool in Wharsdale Leeds, L521 1J2.

SOMEONE willing to help, new Amiga A500 owner, printer trouble amoung otther things. Please Ring 06973 31759.

WANT, new Amiga, public domain, cheaply and quickly? 40p a disk, plus demos and games on catalogue disk. Disk and stamp to: Burmans PD, 41 Pinner Park Gardens, Harrow, Middlesex, HA2 6LQ.

AMIGA PD, over 250 titles, 75p per disk including p+p. Send SAE for list to Pete Smith, 10 Linden Rise, Bourne, Lincs, PE10 9TD.

◆ ANNOUNCEMENTS

ATARI ST, PD to swap, senD SAE to: Adrian Judd, 25 Windmill Way, Reigate, Surrey, RH2 OJB.

HELP! I am trying to learn 'C', but can't seem to get very far. Can any other Amiga user, help me? Contact Paul, 90 Notley Road, Lowestoft, Suffolk, NR33 OUG.

ATARI 8-BIT owners, London based user group stsrting. All machines supported, cassette and disk. PD and soft-mag, to follow. Contact Algie, 47 Buchanan Gardens, London, NW10 5AD, enclosing SAE.

PC MONTHLY, a monthly magazine, disk packed full with software, news and letters. For more information, write to: Richard Lillycrop, 19 Nelson Court, Watton, Norfolk IP25 6EL.

BUSINESS idea's wanted. ST owner with D.T.P. database, etc wants to start a small but profitable business, but lacks idea's. Offers of Help:- Mr. Ogden. 8 Bertelin Road Stafford, ST16 633.

CRYSTAL juction B.B.S now on-line completely free no changes(ormaccy the project BBS) Now on (0384) 441929. All speeds 300/ H.S.T 24

THE PD COLUMN

Intrepid space explorer and PD detective Frank O'Connor checks out the latest and greatest in Public Domain software.

Wow! You just bought a brand new Amiga. 16-bit processing power. 4096 colours, four channel stereo sound. Hardware scrolling, independent graphics custom chips, in short, the business. You pull that shiny beige sucker out of its packaging, with polystyrene and plastic flying everywhere. Plug it in, switch it on, and boot up the most incredible piece of Amiga software ever... the *Sinclair Spectrum Emulator!*

Oh you lucky Amiga owners! Amiganauts United has come up with a

A PD firm has come up with a game that makes most full-priced software look more than a little shoddy.

disk containing three emulation packages. The Sinclair Spectrum, Sinclair QL, and Commodore 64 can all be imitated in a very convincing fashion.

None of the emulators can accept input other than from the keyboard, and so loading Spectrum, C64 or QL software is impossible. Great fun however, can be

had mucking about with the operating systems of these ancient but revered machines.

Upon booting up the Spectrum emulator, the Amiga screen blanks out and glitches in exactly the same fashion as the old 48K Spectrum. It really is very convincing, and uses exactly the same typeface as the Speccy. Once loaded, your fingers are itching to re-explore the delights of prehistoric BASIC. The emulator is very accurate, too accurate in fact, even the complex and bizarre keystroke features of the Speccy have been retained.

You cannot actually type a direct command into the machine. A difficult and annoying system is used, whereby the user presses for example "p", and the command PRINT automatically registers. The commands can be difficult to find on the Amiga keyboard, just try and find LET or GOSUB.
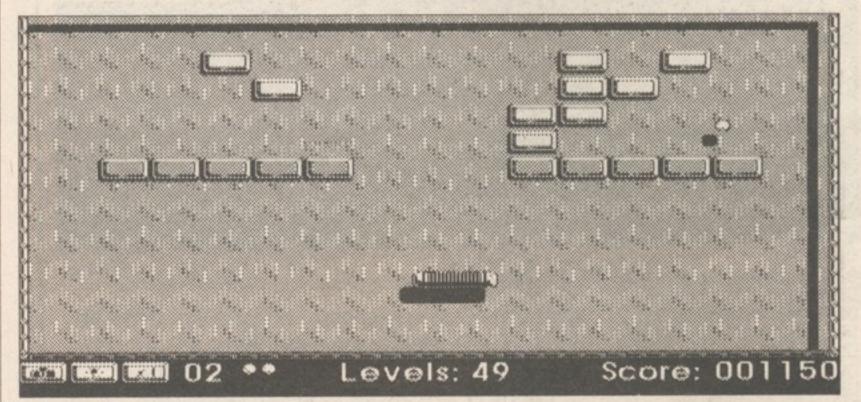
The C64 emulator is just as accurate, retaining all of the BASIC

functions of that machine. The QL was a strange beast at the best of times, and that inherent strangeness has been retained. As far as I can see, all of the emulators look and act exactly the same as the machines they imitate. All of this is a great deal of fun, but limited by the fact that you cannot load software. Still, for the price of the disc, you do get three distinctly different BASIC systems. One

point that should be stressed, to anyone who thinks that running 8-bit emulations on a 16-bit means speed, is that the emulators noted here run quite slowly, especially the Spectrum emulator.

IS *ARKANOID*'S SUCCESSOR JUST A LOAD OF BOLOS?

In an unprecedented and utterly shocking move, a PD firm has come up with a

● **Bolo:** *This pacey Arkanoid variant has smooth graphics, and stands head and shoulders above other games of this ilk.*

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game that makes most full-priced software look more than a little shoddy. *Bolo* was sent my way by Gemini Shareware and is a very interesting variation on the *Arkanoid/ Breakout* theme.

The player controls a bat, with which he or she must deflect a ball, and in doing so, clear the screen of bricks. This will sound very familiar to *Arkanoid* fans, but it puts an original twist on a somewhat jaded theme. In *Arkanoid*, your bat is confined to the bottom of the screen. In *Bolo*, you can move the bat anywhere you please. The ball responds in a realistic fashion, and minute adjustments can be made to its flight path.

Because of the Bat's freedom of movement, it is possible to hit the ball with the base of the bat which provides some spectacular moves.
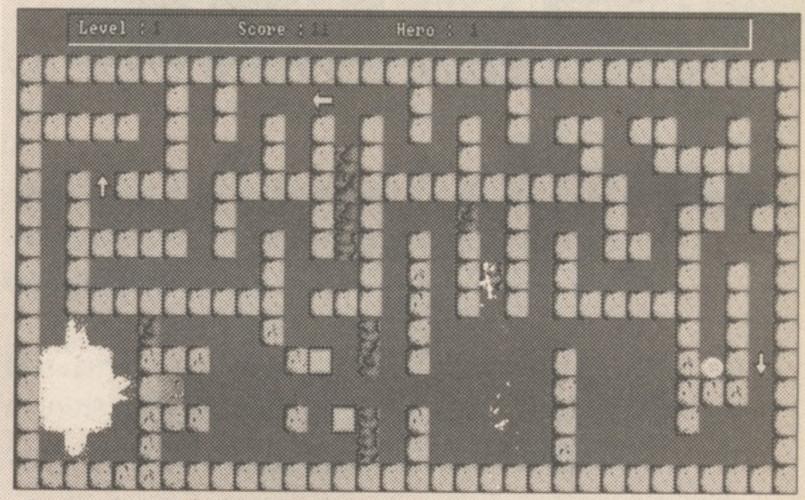
Those damned bricks act in various ways all of which are guaranteed to frustrate you, the symbols emblazoned in the centre of each brick indicate how it will react to contact with the ball.

Some explode, some cause adverse bounces, but almost all of the bricks will present you with major difficulties.There are some 50 screens ahead of the player, after which you must confront a very nasty guardian, who must be defeated to complete the game.

During the game, gravity can alter from screen to screen. Gravity varies from zero, to almost Jovian (Frank Fact Number 1: that's about 55 times greater than Earth) pressure. The ball seems to gain a lot of weight, and can act very strangely on contact with the bat.The game supports all three ST resolution modes, and this is a real boon to mono users. The graphics themselves are impressive bordering on outstanding, only the sound lets down the presentation side of things.

All in all, an excellent variation on the *Arkanoid* theme, and the biggest shock is that it isn't a full price game. ∎

RUNNING... MAN · Amiganuts · Amiga

• **Running**: *A game of a-mazingly explosive fun as you slaughter monsters for under a fiver.*

Also from Amiganuts is a nice little game called *Running*. Quite reminiscent of the PC Engine title *Bomber Man*, you control a jolly little sprite who's task is to clear the maze filled screen of monsters. The mazes are quite complex at times, and contain rock walls which have to be destroyed to allow progress through the maze.

The character you control can drop an unlimited supply of bombs, either to kill monsters, or demolish walls. The monsters are quite intelligent, and will avoid any bombs in their line of sight. They can be tricked however, and it is quite easy to lure them to their doom. Once a bomb

has been dropped, you have a couple of seconds to get out of the way before it detonates, killing anything in the small blast radius. Clear one screen, and it's off to the next, more difficult maze.

The poor quality of the graphics shouldn't put you off, because underneath the lack-lustre finish is a very addictive game. This title is doubly impressive because of the addition of a screen designer, which allows you to change the maze layout and the behaviour of the creatures who inhabit it.

All in all excellent fun, and one of the few essential PD games of recent times.

WHERE TO GO THIS WEEK

If the Amiga is your main squeeze, then you should make every effort to speak to the dudes at AMIGANUTS UNITED. Look them up at: Amiganuts United, 169 Dale Valley Road, Hollybrook, Southampton SO1 6QX. Telephone: 0703 785680.

GEMINI SHAREWARE can offer some extremely sexy ST PD, and if you want to grab them and get your hands on it, then you should contact: Gemini Shareware, 10 Warwick Avenue, Slough SL2 1DX. Tel. 0753 28183

EXPRESS ON-LINE

Our comprehensive listings service this week featuring User Groups from A to J plus new entries.

3JJ.BBC-B PD – From just 14p per disk. Send SAE to BBC-B PD, 21 Whitehorse Street, Hereford, HR4 0EP. Send 50p plus disk for sample and catalogue. Send 20p for three page catalogue.

ABC AMIGA BEGINNERS' CLUB – PD library review. More info in beginners' pack. Send £1.50 to Ian, 110 Whitehill Park, Limavady, Co Londonderry, N.Ireland, BT49 0QG. Tel: 0504 765174

ACORN 8-BIT PD SOFTWARE – Write to Alan Blundell, BBC PD, 18 Carlton Close, Blackrod, Bolton, BL6 5DL. Send SAE for £1.50 for sampler disk

ACORN ARCHIMEDES.RISC USER 117 Hatfield Road, St Albans, Herts.

ACORN ARCHIMEDES Archive, 18 Mile End Road, Norwich NR4 7Q

AMATEUR RADIO (CBM) – Simon Lewis GM4PLM Commodore Radio Usrs Group, 69 Irvine Drive, North Clippens, Linwood, Paisley

AMIDOS AMIGA PD SWAP CLUB – Send blank disk for details. No enlistment fee. Send SAE for prompt reply to 25 Salamanca Road, Cheltenham, Glos GL52 5LA.

AMIDOS AMIGA PD SWAP CLUB – send blank disk with an SAE or £1 for a starter catalogueand details on how to join. A prompt reply given to all members and new applicants.

AMIGA AND PC PD CLUB – Contact Prestel MBX 011115474 or send stamp to 48 King William Drive, Cheltenham, Glos, GL53 7RP

AMIGA CHEAT DISK FANZINE – JS Smith, 45 Maplecroft Crescent, Sheffield S9 1DN.

AMIGA DISK MAG –with a new style with over 100 pages of news, reviews, art, music, and PD on two disks. Send £3 to Paul Harthen, 43 Boyds Walk, Dukinfield, Cheshire, SK16 4AX

AMIGA HELP CENTRE – A group to help novices. For CLI help disk and registration send £10 to Simdev, 29 Avon Square, Hemel Hempstead, Herts.

AMIGA HELPLINE SERVICES – Free club for young and old. Send SAE toG Keenan, 21 Skirsa Place, Glasgow, G23 3EE.

AMIGA LA FANZINE – Only £2 including membership. Write to L Stacey, 3 Norfolk Close, Bewbush, Crawley, West Sussex, RH11 8GJ

AMIGA LOST GAMES CLUB – We are setting up a gropu to program Amiga games and send out demos to the different publishers so we need designers, coders, artists and musicians for the Amiga. Ring 0782 266964.

AMIGA OWNERS – PD software to swap and sell. New library for Irish Amiga owners. Phone John at Limerick (061) 312257 or write to 21 Lower Careys Road, Limerick, Ireland.

AMIGA PD – over 600 disks. Only 75p each. For catalogue send SAE and 50p to Mark Knight, 20 Mayfield Crescent, Patcham, Brighton, Sussex, BN1 8HQ or tel 0273 557113. Special bulk prices on orders over 50 disks.

AMIGA PD – Software for sale. If you live in South Wales then look no further. Disks only £1.50 inc P&P. Write now to SWAPD, 38 Syon Parlk Close, St Mellons, Cardiff. All the latest in demo, music, utils etc

AMIGA PUBLIC DOMAIN – only 85p per disk. Send SAE for details to Paul Brown, 14 Elmfield Road, Rossington, Doncaster, DN11 0BP or call 0302 865148 after 7pm.

AMIGA PUBLIC DOMAIN – JJ Meachen, 59 Lee Road, Harwich, Essex, CO12 3SB.

AMIGA PUBLIC DOMAIN USER GROUP – Ashley Tarver, 5 Saunders House, Binswood Avenue, Lemmington Spa, Warks, CV32 5RZ

AMIGA SHAREWARE – Send SAE for lists to 4 Sedgewick Close, Atherton, M29 9EF

AMIGA SOFTWARE EXCHANGE SERVICE – small friendly swap service. Good selection. SAE for information to 13 Bournville Lane, Birmingham B30 2JY. Free PD swaps. Telephone 021 4597576.

THE AMIGA TEAM – A group to help novices. Help given in programming – Assembly, BASIC, C, Logo, Pascal and CLI. For registration and introduction pack send £10 to 11 Beech Grove, Northallerton, North Yorks, DL6 1JY

AMIGANAUTS Disk Fanzine – Two disks, issue one out now. Only £2.50. Loads of PD demos, reviews etc. SAE for info or cheques/POs to N Gilling, 1 France Furlong, Great Linford, Milton Keynes, Bucks, MK14 5EM.

AMOS/STOS PD LIBRARY – send SAE for a catalogue to 25 Park Road, Wigan, WN6 7AA. Telephone 0942 495261 before 6pm.

AMSTRAD BUSINESS USERS - Amstrad Professional User Club, enterprise House PO BOX 10, Roper St, Pallion Ind Estate, Sunderland SR4 6SN. Tel 091-510 8787

AMSTRAD CPC USERS - Tony Baker, United Amstrad User Gp, 26 Uplands Crescent, Fareham, Hants PO16 7JY. Tel 0329 234 291

AMSTRAD CPC HOME USERS – Steve Williams, WACCI, 9 South Close, Twickenham TW2 5JE. Tel 081-898 1090

AMSTRAD LOCAL GROUPS - Amstrad Groups Federation, 4 Sutton Road, Gorton, Manchester

AMSTRAD PC SOFTWARE - Colin Smith, Colbar, 10 Penwood cl, Westbury, Wilts BA13

AMSTRAD PCW - PD software: Bob Ellis Tel 0432 761860 Queries: David Axford Tel 0428 56438

AMSTRAD PCW - Bob Ellis "Rowan" 100 St Peters Close, Moreton-on-Lugg, Hereford HR4 8DW. 0432 761 860

AMSTRAD 1512/1640/PPC - PC Independent User Group, The Computer Advice Centre 87 High Street, Tonbridge, Kent. Phone 0732 771 512

AMSTRAD BUSINESS USERS – Amstrad Professional User Club, Enterprise House PO BOX 10, Roper Street, Pallion Industrial Estate, Sunderland SR4 6SN. Telephone 091-510 8787

APPLE II USERS – tel 051 9284142.

APPLE MACINTOSH. John Lewis, Macintosh user group, Macintosh House, 11 South Parade, Summertown, Oxford OX2 7JL

APPLE SYSTEMS – Irene Flaxman, Apple 2000, PO Box 3, Liverpool L21 8PY.

ARABIC COMPUTING – Rich Lackey, Arabits, 9 Bellview road, Worthing, West Sussex BN13 1EY

ARCHIE PD – for 2.4Mb sampler pack send three E Format disks, SAE and £1 to Archie PD, Dept NCE, Highover, Udimore, Near RYE, East Sussex

ASHTON TATE SOFTWARE - Silvia Robinson, Baseline, Ashton-Tate, 1 Bath Road, Maidenhead, Berts 0628 33123. Prestel page 43221

ASTAC – a new Atari ST and console mag. For details send an SAE to Astac, 383A Drayton High Road, Hellesdon, Norwich, Norfolk, NR6 5BG.

ASTMATIC AARDVARK PD FACTORY – the best for PC, ST and Amiga. Send £1 for a demo disk toHighover, Udimore, Nr Rye, East Sussex, TN31 6BG.

ATARI ALL MACHINES – Colin Hunt, BaPAUG, Wimborne Road, Oakdale, Dorset BH15 3EF

ATARI AND ST PC EMULATOR SUPPORT CLUB – SAE to 153 Parrock Street, Gravesend, Kent, DA121ER

ATARI CONNECTION PD – High quality disks only. Only 99p per disk. Wide selection – utils, demos, games etc. For disk catalogue send disk to ACPDL, 72 Lancelot Avenue, Strood, Kent

ATARI PORTFOLIO - D Gilpin, Atari Portfolio User Group, 84 Cambridge Avenue, Gidea Park, Romford RM2 6QU. 0708 730764

ATARI ST DIY HDISK BUILDERS CLUB – information on how to build from scratch an HDisk system for your ST. Help given on what you'll need and how to connect it all up. Call 0495 272092

THIS WEEK'S NEW ARRIVALS ON-LINE

Burman's PD – second hand originals for the Amiga. Games like Strider 2, Powermonger, Golden Axe plus many more. Write to Burman's PD, 41 Pinner Park Gardens, Harrow, Middlesex, HA2 6LQ.

SEGA MEGEDRIVE CARTRIDGE CLUB– Large selection of games. We swap, buy and sell, new and old cartridges. Send SAE for latest list to 28 Elmfield Road, Hyde Park, Doncaster, S Yorks DN1 2BA. Tel 0302 344529.

MG SOFTWARE – Atari ST Public Domain, only 65p and £1.Send an SAE for a cartridge to MG Software, Cornerways, Beckingham Street, Tolleshunt Major, Essex CM9 8LL.

STAR PD – Software for the Atari ST/STE. Hundreds of disks available. Send blank disk and SAE for free PD and disk based catalogue to Star PD, 1 Solva Road, Clase, Swansea, SA6 7NX.

HALL OF IMAGES PD – PD, clip art, ST specialists. Scannin service and Atari PD (fun and serious). Demo disk £2 with £2 off your first order. If you need clip art we have it. Write to 5 Allington Drive, Barrs Court, Warmley, Bristol BS15 7AS. Tel 0272 607254. Cheques payable to S Hall.

ST CHURCH USER GROUP – Disk-based magazine and mutual support forum for christian ST users. Details from the Reverend Joe Clemson. Tel 091-487 6944.

STEVE'S AMIGA PD – Amazing Amiga PD catalogue. See Demos, usable virus killer. Send £1 plus SAE (9x4 minimum) to Mr S Fitch, 1 The Croft, Welwyn Garden City, Herts, AL7 4JY. All PD 75p.

ACORN ARCHIMEDES GROUP – meets every month. Ring Az on 0633 216500 (work) 0633 220824 (home). Amiga owners also welcome.

POTENTIAL PD – for the Atari ST to sell and swap. Send SAE and blank disk or 80p to Potential PD, Helenville, School Road, Coldingham, Berwickshire, TD14 5NS.

AMSTRAD 6128 – cherche correspondant perlant Français pour echange achete revues Amstard computer user ou autres avec listings. Roger Lorrain, 23 Route de Fretterans, 71270 Pierre De Bresse, France. Au revoir!

ATARI REPAIR AND UPGRADE CLUB – Help givern on repairs. Dead, duff, hit with hammer jobs and botched memory upgrades. Ring Mark on 0495 272358.

ADRENALIN PDL – for the Amiga. Demos copied on Sony ASDD disks, £2.20. High quality disks £1.20. Many Public Domain disks in stock. Send SAE for catalogue to 7 St James Close, Kettering, Northants NN15 5HB.

TYPECAST PDL - Catalogue issue two out now. PD, DTP, WP, art and clip art for Atari ST/STE. No games. Send disk and SAE for catalogue to 31 Hartfield Crescent, West Wickham, Kent BR4 9DW.

SPANDEFANG SOFTWARE – 68000 and coders magazine. For free first issue send stamped addressed envelope and blank Atari ST disk to 4 Cambridge Terrace, Harrogate, N Yorks HG1 1PA.

SOFTWARE EXCHANGE SERVICE – Buy, sell, swap games (mostly Amiga) SAE for info to 13 Bourneville Lane, Birmingham, B30 2JY. New Telephone number: 021-459 757. Free PD swaps.

AMIGA PD WANTED – I am currently setting up a library. If you have any good PD to contribute please send it to C Waite, 22 Merryfields Avenue, Hockley, Essex. Every contributor will receive free orders from our library.

LYNX USER GROUP – Send a stamped addressed envelope for newsletter which includes reviews to Mr Areid, 63 Croftway, Selby, N Yorks YO8 9DD.

WEST COUNTRY PDL – ST Public Domain and shareware. Large library. Send stamped addressed envelope and blank disk or £1 for catalogue to PO Box 2, Lynton, North Devon, EX35 6BS.

TOTAL PD – for the ST. Send SAE for free catalogue to Total PD. 27 Stanmer Villas, Brighton, East Sussex, BN1 7HQ. We buy, sell and swap PD.

GUNNING PD – For the ST. All disks only £1 each. Send three first class stamps for disk catalogue to 47 Auchingane, The Tryst, Edinburgh, EH10 7HX.

AMIGA PD – We are demo creators sailing the best PD at £1.50 inc P&P. Send SAE for free catalogue to 11 Macklin Road, Salisbury, Wiltshire, SP2 7HB. Tel 0722 326057.

MEGA PD – Amiga Public Domain for only £1 per disk. Blank disks 50p each. Send SAE now for free catalogue to Mega PD, 29 Nuthatch Close, Billericay, Essex CM11 2PQ. Tel: 0277 658435.

ATARI ST OWNERS – public domain from £1.50 per disk. Write to 22 Merryfields Avenue, Hockley, Essex, SS5 5AL.

ATARI ST SOFTWARE – write to 16/32 PD library 35 Northcote Road, Strood, Kent ME2 2DH

ATARI ST - Paul Glover, The ST Club, 9 Sutton Place, 49 Stoney Street, Nottingham NG1 1LX. 0602 410241

ATARI ST demos/PD wanted. If you can write demos or want exclusive titles. Write to ST Demos, 8 Bertelin Road, Beaconside, Stafford, ST16.

ATARI ST/STE HELPLINE – We can scan, digitalise and provide loads of clip art. SAE to Nist 53, Lenaghan Park, Belfast, BT8 4JB.

ATARI ST USERS – ELECTRON. 2 disks plus 40 page mag. Reviews, articles, games, advice, electronics, software library (PD 50p each) and Chess. £3.50 inc membership (refundable). Andrew Betts, The Mount, Wood Lane, Gallowstree Common, Reading, Berks, RG4 9BG

ATARI ST USERS ASSOCIATION – provides support for all Atari ST/E users. Help and advice given. Quarterly club magazine and disk. Also exclusive PD library for members. For further information write to ASTUA, 18 Poplar Close, Biggleswade, Beds, SG18 oEW

BBC MICRO - BEEBUG, 117 Hatfield Road, St Albans, Herts AL1 4JS. 0727 40303

BASIC PROGRAMMERS' GUIDE – for all BASIC programmers. Phone Andy on 081-648 4326.

BATPUG – Turbo Pascal user group also open to other PC Pascal programmers. Costs £10 per year. Write to 12 Clegg Avenue, Cleveley's, Blackpool, FY5 9BJ. Send an SAE for sample.

BURMAN'S PD – Amiga PD for 40p. For a catalogue on disk, a few demos and a game send a stamp and disk to Burman's PD, 41 Pinner Park Gardens, Harrow, Middlesex, MA2 6LQ

BYTER PD – For list and latest titles of Atari ST and Amiga PD write to Byter PD, PO Box 182, London, SE6 1BZ

C64 PD CLUB – E Masaba, 84 Garmoyle Rd, Liverpool L15 3JH

C64 PUBLIC DOMAIN – Phoenix, 64 Plumberow, Basildon, Essex

C LANGUAGE – Bi-monthly newsletter, C source library and BBS. £14pa. Contact Francis Glassborow, 64 Southfield Road, Oxford, OX4 1PA.

C USERS GROUP – Francis Glassborow, 64 Southfield Road, Oxfoed OX4 1PA. For everyone interested in the C and C++ programming languages. Publishes a bi-monthly newsletter.

CAMBRIDGE Z88 – Roy Woodward, Z88 Owners' Club, 68 Wellington St, Long Eaton, Nottingham

CD ROM – UK CD-ROM User Group, High Wings, Salem, Treforys, Abertawe 0792 844 370

CHESHIRE 16-BIT USERS CLUB – Amiga, ST, PC, Arc at Radley Common community centre, off Poplars Avenue, Orford, Warrington, Friday nights. All welcome. £1 admission.

CHESS COMPUTER PROGRAMMERS and interested players send an SAE to Steve Roe, 25 Nene Walk, Worksop, Notts or ring BBS 0909 479080

CHOICE – on-line help. Tel 0308 23224

CHESHIRE NIMBUS USER GROUP – Geoff Nelder, Queens Park High School, Handbridge, Chester

CHURCH ADMINISTRATION - Rev Stoker Wilson, Church Computer User Group, St John's Vicarage, Greenside, Ryton, Tyne & Wear NE40 4AA. 091-413 8281

CID (Computers and Integration for the Disabled) is a registered charity. Write to Gordon, Chelsea Road, Inverurie, Aberdeenshire, ABS 9QZ or tel 0467 24202

CLERGY/MEDICAL EDUCATION – Mr T Jones, FREE-ED Shareware/PD 85 Stoke road, Taunton, Somerset TA1 3EL. Tel 0823 321 481

CLUB AMIGA answers your questions on software and hardware on its 24 hour helpline. Join now. Send £5 to Club Amiga, 5 Bowes Lea, Shiney Row, Tyne and Wear DH4 4PP.

CMS PD LIBRARY – Sam Coupé PD software for only £1.50 a disk. Send an SAE and a blank disk (or 70p) for a disk catalogue to CMS PDL, Dept NCE, 70 Donald Drive, Chadwell Heath Romford, Essex, RM6 5DU.

COBOL LANGUAGE - Allen Reavie 22 Mourneview St, Portadown, Northern Ireland. BT62 3AW

COLECO ADAM - Keith Mamer, UKAS 33 Homer Road, Croydon CXR0 7SB

COMMODORE ALL MICROS - Jack Cohen, ICPUG, PO Box 1309, London, N3 2UT. Tel 081-346 0050 after 6pm

COMMODORE 64 CLUB has been on the go for the last five months and new members are welcome. For more details send an SAE to The C64 Club, 20 Finlow Place, Dundee, Scotland

COMMODORE AMIGA - UK Amiga Users Group. Contact 144 Charles Street, Leicester LE2 0OD. Telephone 0533 510066 voice; 0533 517615

COMMUNITY COMPUTING - Community Computing Network 2nd Floor, 35 Pink Lane, Newcastle, NE1 5DW. Tel 091-261 0317

COMPUCORP. Compucorp University users group c/o Compucorp, Cunningham House, Westfield Lan, Kenton, Middx

COMPUNET – write to Independent Compunet Club, 148 Furzehill road, Boreham Wood Herts. WD6 2DX

COMPUTER LYNX – Amiga disk magazine. Only £1.50 plus 50p p&p. Huge range of PD from £1 per disk. Write to 187 Perrysfield Road, Cheshunt, Herts, EN8 0TL.

CONFERENCING - Compulink, suite 2, The Scantuary, 23 Oakhill Grove, Surbiton, Surrey KT6 6DU Voice 081-390 8446. CIX BBS 081-399 5252

CPM & MSDOS Users Group – 42 Birkbeck Road, Wimbeldon, London SW19 9NZ. Tel 081-543 0824

CRYPTOGRAPHY & CODES - Mike Barlow, American Cryptogram Association 5052 Chestnut Avenue, Pierrefonds, Quebec HBZ 2A8 Canada

DATAEASE USER GROUP – High-Tech House, 10 Blackfriars Street, Norwich, NR3 1SJF

DATA PD LIBRARY for Amstrad CPC users. Send SAE, tape/disk and 50p to Kingsmill 202 Park Street Lane, Park St, St Albans, Herts AL2 2AQ

DIGITAL PD LIBRARY – for the Amiga. All disks priced at only £1. Write for a full catalogue to Digital Pd, 20 Vere Road, Hillsborough, Sheffield S6 1SB.

THE DISK issue two for Amiga users. Packed with PD including Power packer, Superecho, Game, Textra, Poipoi, Demo, Iconmaker and loads more. Send £1 to S Lord, 6 Stubbing Brink, Hebden Bridge, West Yorkshire, HX7 6LR.

DISABLED – Jeff Hughes, Special Needs User Group, 39 Eccleston Gardens, St Helens WA10 3BJ 0744 24608

DMS ATARIPDL – Quality public domain for ST/STEs. From 90p per disk. For disk-based catalogue send 50p and SAE or blank disk and SAE to DMS ATARI PDL, C/O N S Klee, 66 Abbey Road, Strood, Kent, ME2 3QB.

DRAGON - Paul Grade, National Dragon Users Group, 6 Navarino Road, Worthing, Sussex or tel 0903 207585

ECONET - Michael Ryan, Econet User Gp, Balkeerie Cottage, Eassie by Forfar, Angus DD8 1SR

EDUCATION – Charles Shannon, TECUG, 35 Wellington St, Gravesend, Kent DA12 1JG. Tel 0474 567 931

EIGHT-BIT BACK-UP 8-bit user group for all. 25p plus SAE. to: 8-bit back-up, 1 Northolme Close, Grays, Essex.

EINSTEIN PD – Amiga PD all disks only 80p for the latest list send SAE to The Forge, Pipers Lane, Godmanchseter, Cambs, PE18 8JN

EINSTEIN – Graham Bettany, UKEUG 80 Dales Road, Ipswich IP1 4JR

EINSTEIN PD USER GROUP – Help and advice for all Einstein users. Over 100 disks of PD software. Send SAE to SW Knowles, 23 Howldsworth Rise, Arnold, Nottingham, NG5 8HZ

ELECTRIX PDL – CBM and Amiga PD for £1 a disk plus 40p P&P. All the latest PD in stock. For a catalogue disk with demo and music write tio Electrix Amiga PD, 68 Donald Drive, Chadewell Heath, Romford, Essex, RM6 5DU

ELMSOFT PUBLIC DOMAIN SERVICE for the ST any weekend at Camden canal market, Haven Street, London

EMULATE. For Amiga, Amex. Monthly newsletter. Write to Pat 12b Northbrooks, Halrow, N Essex

ENTERPRISE – William Creaser, 6 Provident Street, Shaw, Oldham, DL2 8AQ. Independent Enterprise user group. Tel 0706 881382

ENTERPRISE - Tim Box, Independent Enterprise User Group, 50 Holdenhurst Avenue, Finchley, London N12 0HX. Tel 081-346 8032

ENET (like Econet) - T K Boyd, Enet (Amcom) User Gp, Seaford Cottage, Petworth, West Sussex

EXMOORE SOFTWARE – Queen Street, Lynton, N Devon EX 35 6AQ

FIND YOUR LOCAL CLUB – British Association of Computer Clubs. Database of all user groups in the UK. Banc y rhosyn, 14 Bron Y Glyn, Bronwydd Arms, Carmarthen SA33 6JB.

FORTH Language – Douglas Neale, FIG (FORTH Interest Group) UK, 58 Woodland Way, Morden, Surrey SM4 4DS

FRACTALS/CHAOS THEORY - Andy Lunness, 69 Bronte Avenue, Bury, Lancs BL9 9RN. Telephone 061-764 6469

GARFIELD'S PD – Amiga PD software to swap or for sale. Send 99p for disk catalogue to 40 Penrhos Cres Rumney, Cardiff, South Wales

GENEALOGISTS - Computer Group, Society of Genealogists, 14 Charterhouse Buildings, London EC1M 7BA. 071-251 8799

GENERAL AMIGA – disk based magazine for the Amiga. Only £1.50 per issue. Send order to 19 Earn Court, Alloa, Clacks, FK10 1PT

GENERAL HOME MICROS - Steve Winter, Chic Computer Club, PO BOX 121, Gerrards Cross, Bucks SL9 9JP 0753 884473

GEOS USER GROUP – for C64 and 128 owners. Disk based magazine. Send blank disk to GUG (UK) 110 Deansway, Woodloes Park, Warwick CV34 5DQ

GUG (UK) – GEOS User Group for C64/128. Also non-GEOS PD library. Send disk and return postage for GEOS, SAE for non-GEOS to GUG (UK), 110 Deansway, Woodloes Park, Warwick CV34 5DQ

GUNNING PD PD – Atari ST PD library. Disks only £1 each and supplied on branded disks. Send three first class stamps to 47 Auchingane, The Tryst, Edinburgh, EH10 7HX for disk catalogue. Wow!

GROUND FLOOR USER GROUP – support for all serious users of PC, ST, Amiga and PCW. Meets monthly in Calderdale, West Yorkshire. Further information from Jae on 0422 844991 days or 0422 845789 eves.

GUAGE - Martin Houston CUG (UK) Houston Technology Ltd, 14 Arden Oak Rd, Sheldon Birmingham BS26 3LX. Telephone 021-722 3168

HOUSING ASSOCIATIONS - Caroline Maries, Micro Users Ltd, Beaver Housing society, 23 Lewisham High Street, London SE13. Tel 081-318 1126

HEALTH WORKERS - Sue Mckendrick, Healthlink, 164 Windsor Rd, Ashton-in-Makerfield, Wigan WN4 9ES. Voice: 0942 712 385

IBM PC USER GROUP – PO BOX 360 Harrow HA1 4LQ.081-863 1191 BBS 081-863 6646

INERTIA ADVENTURES – A ray of light in the dark cavern of the text adventure. Do you dare to enter this saga? Proceed by phoning 0265 51851 for details.

JOEL'S PD GAMES – for Amiga users. PD disks only 90p each. For a catalogue send an SAE to Joel's PD Games, 389 Scalby Road, Newby, Scarborough, North Yorkshire, YO12 6TG. Please add a blank disk.

JOMAC USER GROUP – Spectrum and Amiga tips and pokes sent every month. Write with SAE to Jomac's, Filey Grove, Rhodes Street, Hull

JUPITER ACE – John Charter, Jupiter Ace Forth User Group, 17 Spring Wood Close, Dunston, Chesterfield S41 8BS. Tel 0246 237555

Tim Smith's SOONTOFOLD

Write to 30 Monmouth Street, Bath BA1 2BW
(The page that killed Bambi)

OPENING TIME

I won't make any comment on the new title of this once proud spread. Suffice it to say that unless radical action is taken by the powers that be, publishing-wise, then a down-scaling of the Fold, centre-wise, could be a feasible outcome scenario. Aside from that, it's been a good week. A rather snazzy Amiga demo came flooding in. The office is hotting up for the Summer, all the Macs have melted, and Grimley, the office rabbit, has fallen in love again.

THAT PR SPEAK IN FULL

We've all heard it, or read it, the lingo of the public relations person. But just what does it mean? Here's a few possible explanations:

"We feel that this product range offers maximisations of the upside via creative throughput and excellent artisanship build-wise".
means ...
"It's quite a good game/spreadsheet"
and this ...
"I can take on-board what you're saying but feel that your thought processes may have hit an unproductive area of the positive interface scenario".
means
"I won't take no for an answer"

Crazed PR possé molest Mac in Manson-like frenzy

DRUG FIENDS "DID" MY COMPUTER

Sources close to a major industry figure revealed this week that an innocent Apple Macintosh suffered an horrendous attack at the hands of drug crazed software house public relations and marketing people.

They came in their hordes yelling: "We'll re-organsise your administrative throughput!" and "Come and touch base if you consider yourself to have optimised your tactile quality!!!!". "It was terrifying, horrible, I couldn't believe that these people were allowed to exist in a civilised society", said the Mac's owner, Mrs Joyce Pitiful-Flimsy of Oldham. "They were all wearing shiny double-breasted suits and carrying personal organisers. One of them came up to me and pushed his thing, his organiser, into my face. He had obviously been taking drugs. He screamed: 'Freeeeeebie innit?

● *The Apple Macintosh following the attack.*

Given it wasn't I. Now get your over-all margins around what is probably the most prestigious sales opportunity this decade', then he passed out".

Forensic scientists who attended the scene of the crime at a later date confirmed that the gang had been indulging in sessions of the highly dangerous LashingofLager narcotic.
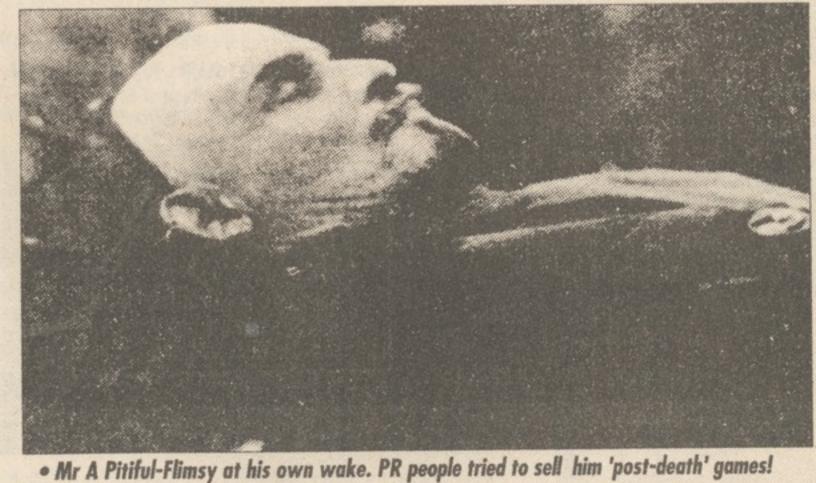
"The women were even worse. They were all wearing 40-inch stack heels, and low cut dresses. They tried to sell my husband, God rest him, on the idea that their games would change the way in which he visualised his death-style scenario. They winked at him and hung their arms around his shoulders.
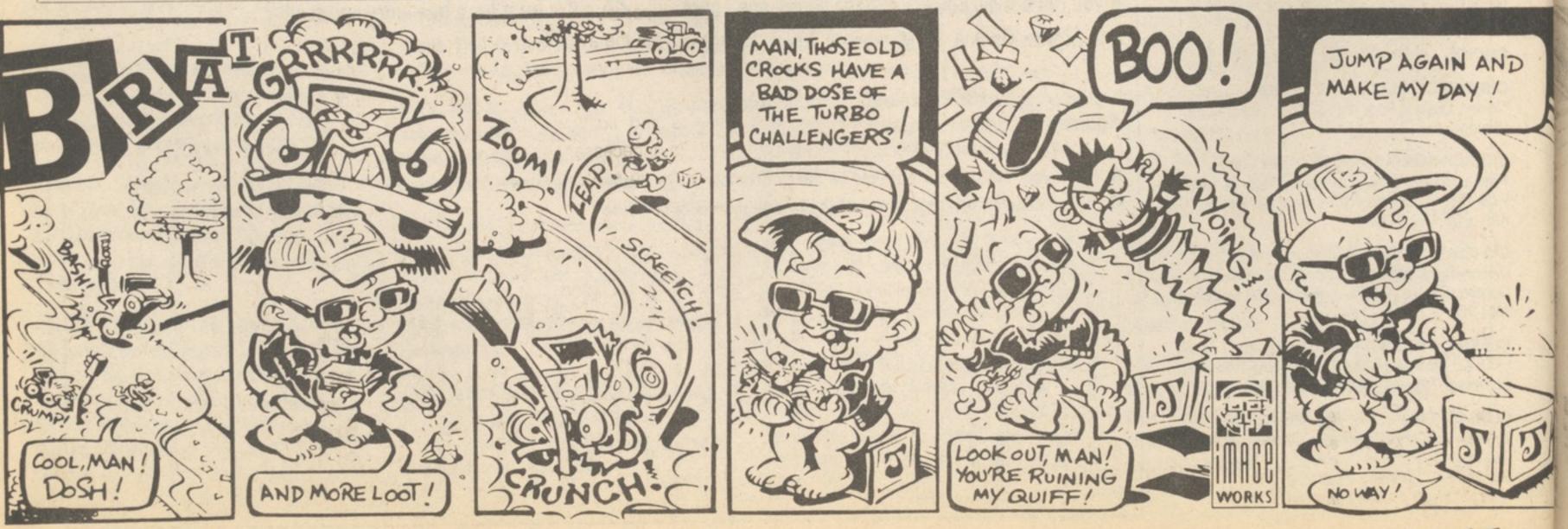
I wouldn't have minded but he was laid out in the parlour, it was his wake you see, he'd been stone cold stiffed for a week after an accident with an Amiga back-up device ".

Mac the knifed

Then they saw the Apple Macintosh,. "They went mad!", said Mrs Pitiful-Flimsy. They were screaming abuse, at least I think it was abuse, I couldn't really make sense of their lingo. It went something like: "Where's the benefits? Where's the margins?" Then they started screaming: "Can't sell!! Won't sell! Can't sell won't sell!! Can't sell!! Won't sell!!"

One of them pulled out a can of blue paint and wrote dreadful obscenities on it. Their leader who called herself 'Group Sales Director with targetting to maximise upside product awareness (Electro Digital Division)' knocked me out with her stilletoes while whispering the following cryptic message: "There's no games for this machine. It won't ever sell"

● *Mr A Pitiful-Flimsy at his own wake. PR people tried to sell him 'post-death' games!*

COOL, MAN! DOSH!

AND MORE LOOT!

ZOOM! LEAP! SCREETCH! CRUNCH.

MAN, THOSE OLD CROCKS HAVE A BAD DOSE OF THE TURBO CHALLENGERS!

LOOK OUT, MAN! YOU'RE RUINING MY QUIFF!

BOO! VOING!

JUMP AGAIN AND MAKE MY DAY!

NO WAY!

THE REAL ADVENTURES OF **BRAT**, THE ANTI CUTE, ARE AVAILABLE SOON FROM IMAGE WORKS ON AMIGA AND ST.

C++ GETS OBJECTIVE

If it's extra features you're after then C++ is talking your kind of language. Mary Branscombe shows you how to turn C into C++ for the best of Object-oriented programming.

C++ is an extension to ANSI C; This means that the structure and the syntax of the language are very similar to C, but more features have been added. You can take a C program, recompile it in C++ and it will run, but it is the extras that are the reason for using C++. Most of the extras give you Object-oriented programming, but some of them are simply improvements, such as the introduction of the keyword `const` for constants, instead of the macro `define`.
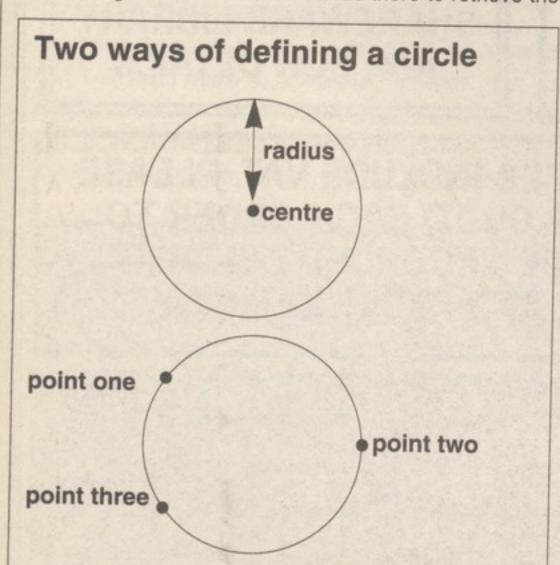
Object-oriented programming, OOPs for short, is based around the notions of objects and classes. An object is anything that you can think of as a "thing" and similar objects are part of the same class. If you can think of a data structure or a procedure as an object, whether it is a window on the screen or an order in a stock control system, then there are probably different sorts of that object: graphics and text windows or overdue orders and unpaid orders, for example. These are both in the class of orders, but they are different objects. A particular order, number 5245 for example, will be an instance of one of these objects. It will inherit the characteristics of the class and object from which it is derived. If an object is derived from more than one class, it can inherit characteristics from multiple classes.

Objects and classes are not just convenient places to store related values. Each object contains the code necessary to perform all the procedures needed for the data in the object. A text window object will store any text that is typed into the window, but it also contains the code to open and close the window and display the contents on screen. The product orders would contain code to calculate the VAT on prices and print out invoices. Each of these procedures is known as a method of the class.

HOW IT WORKS IN C++

A class in C++ is a user-defined data type with fields to hold values. The concept is the same as the `struct` in C, but the keyword is `class`. Any data object that needs more structure than an array can be defined as a class in the same way as a struct and an instance of a class is an object. What you are doing is to abstract the overall shape of the data that you want to work with, call this a class and call individual members of the class objects.
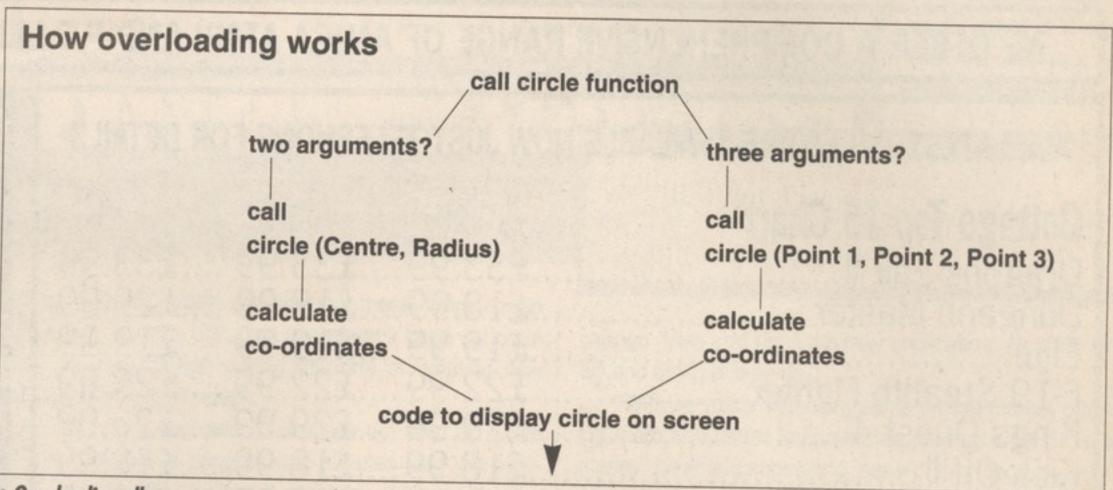
The values stored in the class are members of the class and you can choose whether these values are defined as `public`, and can be accessed from outside the class, or `private` and for use inside the class only. Using private class members means that you can hide information in one part of the program, usually in order to simplify your code. If the only value stored in the class of client accounts that the class of orders can see is the client number, then you do not need any code to sort through the other values stored there to retrieve the client number.

The advantage of using a class rather than a struct is that struct can only contain values stored in variables, but the members of a class can be functions as well as values. These member functions are the methods of the class. A member function is declared within the relevant class and it must be public. Because it is within the scope of the class, it can access the private data members of the class. If one class needs to check any values held as private data in another class, this can be done by invoking a member function in the second class to check the private data and the member functions must be public so that they can be invoked by other classes in this way.

OVERLOAD

Many operations can be applied to a number of data types. If you are writing a function to calculate the average of several numbers, the function will be performing the same calculations in each case but you will need different functions to deal with integers and floating point numbers, for example. This results in unnecessary code and it is very tedious to have to think up suitable names for the versions that deal with integers and floating point numbers: using names like `average_int` and `average_float` can make your code seem rather messy. It would be much easier to use a single name for both functions and use type checking of the parameters to work out which function is needed in a particular case and overloading allows you to do this. You simply define the function as many times as necessary, with the same name.

Overloading can also be used when two functions produce the same results, even if they do this in different ways. If you want to draw a circle on the screen, for example, you can specify the size and position of the circle by giving the co-ordinates of the centre and the length of the radius, or you can specify three points on the circumference. Both methods will produce a circle, but they are different functions. With overloading, there is no need to confuse the issue by trying to remember which function is `circle1` and which is `circle2`. You call the circle function with either two or three arguments and the compiler decides which function definition is needed.

It is important to use this feature carefully or your code can become unintelligible. Function names should only be overloaded when the functions involved are closely related and perform very similar tasks and when different function definitions can be distinguished by the arguments alone. If there is any ambiguity between different definitions and the compiler cannot work out which versions of the function should be called at a particular time, then it will not compile the code.

Unlike Ada, one of the few other languages to provide overloading, in C++, the type of the argument returned by a function definition does not determine which definition of an overloaded function is called.
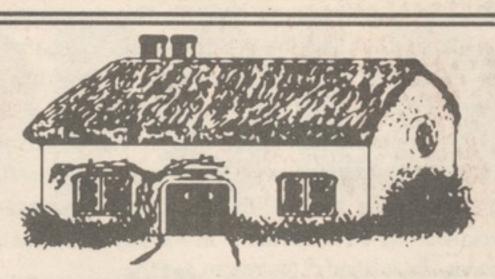
C++ gives you tools for using functions as well as a new way of dealing with input and output. Next week, we put it all together in an object-oriented design. ∎

How overloading works

Overloading allows you to use a single name for different functions, cutting down on unnecessary coding.

Two ways of defining a circle

Overloading can be used when two different functions produce the same results, eg, drawing a circle can be specified with the co-ordinates of the centre and length of the radius, or three points on a circumference.

AND SO TO SUM UP . . .

● C++ contains the best of C - and more.
● A class keeps data, and the code to deal with that data, together in a simple way.
● If two functions do the same thing, you can give them the same name, by overloading.

SAME OLD SONG

Quartet was one of the first programs to prove that you could overcome the limitations of the ST's internal sound chip and create high quality music on the machine without resorting to extra hardware. To a large extent it has since been superseded in terms of features by newer packages, but is now available in a new upgraded version with stereo output.

Essentially, *Quartet 1.5* is pretty much the same as its predecessor. It is a four channel sample sequencer, which means that you can create songs using four different sounds, called 'samples', simultaneously. Samples are digitised versions of real sound or sounds completely generated by computer. The program supplies you with a selection of over 100, ranging from oboes and trumpets to more outlandish ones like 'acid' and 'alien'. Most are of an excellent quality, though there are a couple to which you would be hard pressed to put a name; the piano especially sounds more like a harpsichord. You can also edit individual samples, to change the pitch, frequency and volume, or add special effects.

However, you are not restricted to the samples supplied with the program as it has the facility to import files you have created yourself with a sampler or have obtained from on disk from a PD library.

LAYERING A TUNE
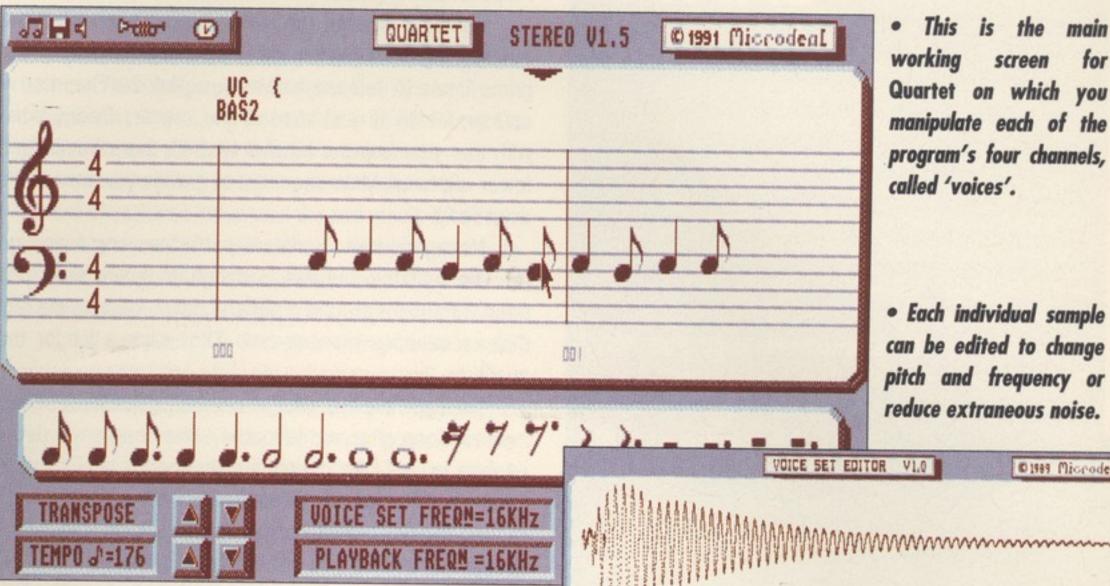
The four different channels are called 'voices' and you have to deal with each one individually, assigning it a sample and designating which notes it should play. Generally one voice will be the drum track, another will be the melody while the remaining two provide the musical frills.

Notes can be entered in two ways. The first is by selecting them from a window at the bottom of the main screen and then placing them in the desired position on the program's stave window using the mouse.

However, the program also has limited MIDI capabilities so in 'Record' mode notes you play on a MIDI instrument will automatically appear in *Quartet*'s stave window . You can either record each voice one at a time to build up a tune, or use the polyphonic mode to play four notes simultaneously, making chords possible. But, despite what it says on the packaging, the program is not 'fully' MIDI compatible, in that you cannot control MIDI instruments using *Quartet*.

Once the notes have been placed on the stave you can edit each voice in a number of ways. You can change, delete or add notes, set up loops for recurrent riffs, or even change the samples being used. Up to 20 different instruments can be used in any one piece of

One of the first multi-track sampling programs for the ST, Quartet, has been upgraded, but Dave Golder fears that it is showing its age.

• This is the main working screen for Quartet on which you manipulate each of the program's four channels, called 'voices'.

• Each individual sample can be edited to change pitch and frequency or reduce extraneous noise.

music and for each composition these have to be defined in a 'voice set'. One has already been set up in the program, though editing this one or creating new voice sets is easy enough.

Tunes created with *Quartet* do not take up much memory space. A song several minutes long will average around 50k, making it ideal for using in demos. There is a utility included in the package for incorporating the songs into your own programs.

LIMITED STEREO

Basically, all that has been added for the upgrade is the stereo sound and unfortunately it is not to get excited about. Voices one and two have been designated the left channel while voices three or four are the right channel. This means that if, say, you decide to have your drum track as voice one you are stuck with having it come out of the left speaker throughout a tune. The whole set-up hardly allows for stunning stereo effects unless you are prepared to spend an incredibly long time swapping the instruments from one voice to another.

The authors have also failed to take the opportunity to rectify some of the drawbacks of the original. For example, not all the functions are accessible from the same screen; to move from editing a voice set to the stave screen you have to quit from one application,

change disks and open the new application. All a bit fiddly and time consuming.

With so many other programs on the market offering more and better features than *Quartet*, and for less money (see accompanying panel), this upgrade is a wasted opportunity to bring the program up to date. It may have been the first program of its type on the market, but without a bit of the rethink it could easily be the first to go as well.

If the possibilty of stereo sound still appeals to you, though, and you only have a mono ST, STF or STFM Microdeal has handily provided the answer with its Playback package. This is a stereo sample player for the whole ST range which connects your ST to an amplifier (most modern portable stereos will suffice for this task). As part of a limited offer, Playback retails for £29.95 on its own, but is currently being bundled for free with *Quartet 1.5*. ■

Quartet 1.5 retails for £49.95. Existing users can upgrade for £3. Contact Microdeal on 0726 68020.

BATTLE OF THE WAVEBANDS

The two main competitors to *Quartet* come from the same company, MPH.

The TCB Tracker costs just £15 and has all the same features as *Quartet* and more besides, including better sample and note editing facilities. It is fully MIDI compatible, and can be used to drive MIDI instruments. As well as instruments, samples supplied with the program

include snatches of dialogue, such as "the president has been shot," and "Ah yeah".

Audio Sculpture retails for £44.95, still less than *Quartet*, and is by far the most powerful package of the three. Fully MIDI compatible it lets you play around with 32 samples simultaneously as opposed to just four with the other two. It is

directly compatible with the Amiga Noisetracker and features a built-in sampler to create your own sounds and a sample editor.

A new enhanced version of *Audio Sculpture*, which *Express* will be reviewing in an up coming issue, is due at the end of the month. In the meantime MPH can be contacted on 0603 503382.
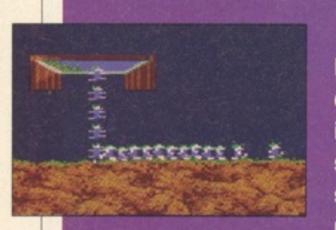
GAMESWEEK

Gary Penn takes a brief stroll down Software Street to do this week's shopping...

CHART CHAT

With the award winning Kick Off and Kick Off 2 under his belt, and Final Whistle topping the charts, designer Steve Screech is in the final throws of putting together a different sort of computer sport – but in the same vein. The basketball simulation Tip Off is being produced in conjunction with Dino Dini, the programmer behind Kick Off and its sequel. Steve has been making use of extensive video footage of American basketball to ensure that the tactics employed in Tip Off are as authentic as possible. Tip Off is due for release from Anco this Summer.

Lemmings creator DMA Design is working on a data disk and a sequel to its previous Number One smash Lemmings. The first set of new levels is due for release this Summer, with the sequel (which is apparently to take advantage of slightly larger creatures to improve the player's emotional commitment) due for release towards the end of the year. Sadly this means that work on the team's big 'n' bold beat 'em up Gore and its impressive-looking shoot 'em up-with-shadows Walker have been suspended until further notice. DMA Design is also putting together the cartoonesque arcade action of Cutey Poo for release before the year is out.

TOP 10
SIXTEEN-BIT GAMES

THIS WEEK	LAST WEEK	TITLE	PUBLISHER	MACHINE
1	3	Final Whistle	Anco	ST AG
2	1	Fantasy World Dizzy	Codemasters	ST AG
3	5	Little Puff	Codemasters	ST AG
4	13	Viz	Virgin Games	ST AG
5	19	PGA Tour Golf	Electronic Arts	AG PC OT
6	6	Speedball 2	Mirrorsoft	ST AG
7	10	Lemmings	Psygnosis	AG
8	RE	Operation Wolf	Hit Squad	ST AG
9	6	Forgotten Worlds	Kixx	ST AG
10	NE	Power Up	Ocean	ST AG

ST = Atari ST AG = Commodore Amiga PC = IBM PC or compatible OT = Other
Chart compiled by Gallup. © European Leisure Software Publishers Association.

Christmas is one of those special times of the year. A time for giving and, best of all, receiving. A time of over-indulgence in every way conceivable. A time – sigh – when our hearts go out to those less fortunate than ourselves.

Easter is special too. And it's just gone. Sod the ethereal significances though. Both occasions represent prime times to release software, unlike the Summer of course, which is just around the corner. Sadly, what with this year being a bit duff and all, there have been fewer releases. Make the most of it while you can, that's what I say.

Novagen does. Software publishers come and go like the seasons, but this Birmingham-based outfit has been with us for around a decade now – despite the fact that its releases number few. That says a lot for the quality.

Novagen's latest output comes in the form of two new versions of an old favourite – the company's debut release in fact. *Encounter* first appeared way back in 1983 on the Atari XL. These new incarnations for the Atari ST and Amiga feature pretty much the same straightforward cat 'n' mouse blasting action as their forerunners, only this time around they look and sound better thanks to some swish three-dimensional effects from Novagen's unreleased shoot 'em up *Skeltor*. *ST Encounter* and *Amiga Encounter* are both due to appear in the third week of April, priced at £19.99 apiece.

Less imminently from Novagen is *Damocles II: Double Trouble* – the sequel to the sequel to the company's mould-breaking adventure *Mercenary*. Once again the comet Damocles is heading towards the planet Eris. With only a few hours to spare, the race is on to prevent disaster. That's trouble number one.

The other half of the Double Trouble is the result of Novagen taking note of a criticism levelled at the original *Damocles* – that the going got a little too lonely at times. Now we have a villain to contend with too.

The bad egg in question goes by the name of K C Kim. He rules the outer reaches of the Damocles solar system, but for some bizarre reason wants to restrict his dominance by destroying the other planets. Needless to say, his exploits cause their own share of problems on each planet.

Damocles II will be released for the Atari ST and Amiga this Summer, a year since the eventual arrival of its predecessor.
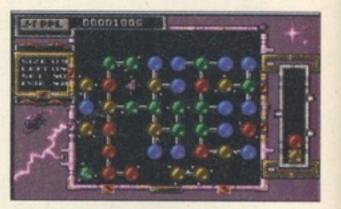
Incidentally, *Mercenary* and the original *Encounter* have been re-released at budget prices. Both come highly recommended. *Encounter* is available on Commodore 64 and Atari 800 for £2.99 via Atlantis – call 081-771 8642. *Mercenary* comes straight from Novagen – 021 449 9516 – priced at £9.99 on the Atari ST and Amiga, and £2.99 for the Commodore 64, Spectrum, Amstrad and Atari 800.

From the small screen to the big screen and back again with the announcement that Ocean has secured the licence to produce the magnetic media incarnations of two new films. The first, which will appear last, is the long-awaited big-screen version of *The Adams Family*. Apparently, the creepy kin is full of famous actor faces, including *Back To The Future* star Christopher Lloyd. Further details have yet to be confirmed.

There is however more information about the second licence, which is for the new Bruce Willis flick *Hudson Hawk*. The *Moonlighting* and *Die Hard* hunk is responsible for the original story and also plays the lead role under the direction of Michael Lehmann (*Heathers, Meet The Applegates*). The story has it that Hawk is the best art-inspired cat burglar there is – or was, as he's gone straight. However, unscrupulous fellows have other ideas. They want Hawk to steal the plans to Leonardo Da Vinci's alchemy machine. He agrees and a manic mixture of action and near-slapstick comedy ensues. The trailers for this potential silver screen smash are currently doing the rounds in most cinemas in preparation for a late Summer release. The software, which is being handled by Ocean's in-house team, won't be seen until later this year.

Finally, here's one for puzzle freaks... In the tracks of the loveable *Lemmings* comes Psygnosis' *Atomino*, a rather smart arcade-style puzzler which originates from Germany. The idea in *Atomino* is to join together atoms to make molecules within the bounds of set tasks. It's as simple as that – but considerably more enjoyable than any science lesson. Judging from the playable preview afixed to the front of sister magazine *Amiga Format*, *Atomino* is one of the most addictive

challenges of this type to appear. Don't miss it when it's released at the end of April for the Commodore 64 (£9.99 on cassette and £14.99 on diskette), Atari ST and Amiga (£25.99 apiece) and IBM PC and compatibles (£34.99).

BONANZA BROS
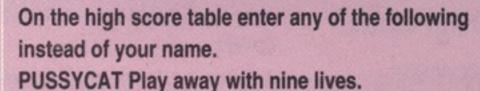
Quite co-incidentally, one of Sega's latest coin-operated corkers is in a similar vein to *Hudson Hawk*. Well, similar-ish. Mobo and Robo are the Bonanza Bros, a pair of small-time crooks made good. They steal anything that isn't bolted down, from banks, homes and even ocean liners. *Bonanza Bros* looks and plays quite differently to any of the company's previous releases. Cleancut, apparently computer-generated imagery fronts simplified, slapstick gameplay. Sega reckons that this difference will prove a big hit with the girls – a quick stroll around some of the London-based arcades revealed that this is not far from the truth. US Gold has acquired the licence to reproduce Bonanza Bros on the home computer systems, though neither a team to do the deed nor a release date have been confirmed.

THE TRAINSPOTTERS GUIDE TO THE ENTERTAINMENT SOFTWARE INDUSTRY

Haven't you always wanted to know more about the people responsible for bringing entertainment software to the stores? Of course you have. Well, now you can. Yes, week by week and in no particular order as such, we will bring you an up-to-the-minute profile on both programmers and publishers. Their software past, present and, best of all, future. Plus, as many of their hints, tips and cheats that we can possibly squeeze in. ∎

NEXT WEEK: Arc Developments

CHUCK ROCK
Core Design
Amiga & Atari ST £24.99 • Sega Mega Drive planned

There's a new neanderthal in town. His name's Chuck Rock. Core Design's latest computer character looks set to do for cavemen what *Rick Dangerous* did for Harrison Ford. Or maybe not.

Comic-books and cartoons are an invaluable source of inspiration for computer and video game designers. Perhaps one fine day the situation will be reversed – maybe sooner than later, what with awareness of Nintendo's *Mario* reaching global proportions.

Chuck Rock is the result of the collaboration between *Rick Dangerous II* designer Bob Churchill and programmer Chris Long (in fact this is 16-bit debut). The platform-based action is at times unashamedly Flintstones-inspired, though apparently the whole sphere of cartoons influenced the end result. Whether the eponymous Chuck will shine world-wide remains to be seen though. Still, he's certainly one of the more endearing characters to appear on the small screen.

And so to the plot: the beer-swilling Chuck is sat watching television while his voluptuous (well, as voluptuous as pixels can be) wife Ophelia hangs out the laundry with baby Pterodactyl pegs. But then... a shadowy figure is seen hiding in the bushes. It's the local nutter Gary Gritter and he's got the hots for Chuck's missus. Groping Gaz sneaks up behind Ophelia and lets her have it with his club before dragging her off by the hair to his lair. The commotion eventually filters through to Chuck's consciousness, at which point he realises that his prehistoric strides have also been half-inched. At last, Chuck sets off in pursuit – via a bush to hide his modesty.

Nothing ground-breaking there, but the story is related via a neat animated introductory sequence. Granted, this in itself is not a new idea either, but it works well enough. It seems only recently that these short scene setters have reached a level of competence – probably because cramming something watchable into very few seconds can't be easy, especially as it's such a different discipline to producing a playable game.

However, Core has succeeded on both counts, to the extent that *Chuck Rock* has a distinctly healthy cartoonesque console feel. (And as fate would have it, Chuck Rock is in fact currently being converted to the Sega MegaDrive).

Artist Lee Pullen (who made his debut with *Torvak The Warrior*) has done well to capture a quality cartoon flavour. Everything about the prehistoric setting is big, bold and colourful, contrasting to great effect against the parallax-scrolling background (on the Amiga that is).

Equally impressive is the fact that it's not only Chuck who has oodles of animation frames which cater for all manner of situation-dependent expressions and movements. Every one of the plethora of prehistoric pests has more than enough detail to ensure that it oozes character too. And all this visual vibrancy is combined with dozens of suitably atmospheric cartoon-like sampled sounds courtesy of one Matthew Simmonds (who also did the same deed for *CarVup*).

Chuck Rock is a right laugh and no mistake. It's fun to watch and, more importantly, entertaining and rewarding to play.

• In this mighty jungle you won't find any sleeping lions tonight. Instead there are dozens of peculiar prehistoric pests to contend with.
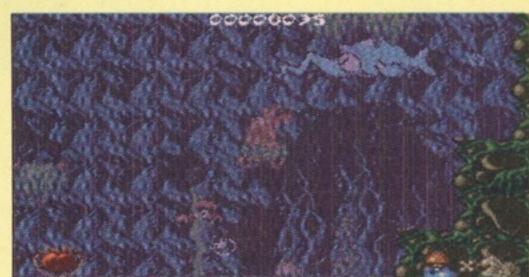
• Not all dinosaurs are unfriendly though... there's a happy pterodactyl which picks Chuck up by the hair and carries him across large and difficult distances. Seen here, though, is a beast who carries Chuck across deep 'n' deadly swamps.
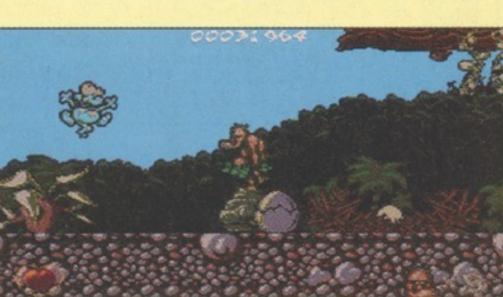
• Chuck has two main means of attack: a flying karate kick and (seen here) a saucy-looking belly bump with accompanying bass-drum bang. And just like Brucey, Chuck has his own (potential) catchphrase – he grunts "Unga Bunga" whenever he begins a new life.

• Chuck also has a talent for taking advantage of the many boulders or rocks lying around, which more often than not provides a novel gameplay twist. Chuck can either using a rock as a step of sorts or pick one up and throw it at something. And then perhaps use it as a step of sorts.

• Chuck's world comprises five different sections, each split into smaller zones with suitable inhabitants. Having negotiated the jungle and a large cavernous section (complete with screen-shaking seismic activity), Chuck goes for a dip under water before moving moves on to a frostier clime – the Ice Age (and you can see his breath). The final section is a land full of dead and half-dead creatures.

GAMES REVIEW

was parked outside all night.

Our next step was to track down the postwoman on whose round the 3/5 Cranford Place address lay. According to Mrs Raby, Mr Gold had once told the postwoman that he was starting up a business and expected some extra mail. We spoke to Ann Edgerton, who gave the following description of the man she knew as John Gold:

● Not exactly very tall - maybe 5 feet 5 inches or 5 feet 6 inches tall and scruffy-looking.
● Dark hair, with a moustache and 'not what you would call a full beard.'
● Quite skinny.
● He wore glasses.

These two descriptions of John Gold are at serious variance with the description that Dr Susan Watson offered...

THROUGH THE LETTERBOX

Continuing our conversation with Ann Edgerton, we learnt that the post for Geographic arrived in a rush that lasted about three weeks to a month: "bundles containing about 40 to 50 envelopes arrived each day" she said. "Then all at once it dropped off".

That could represent as many as 1,000 orders, at £19.95 each.

Then the Post Office received a letter signed by a 'Mr Herbert' telling them that Geographic had gone away.

Mail for Cranford Place is processed in Shipley Post Office, where we spoke

to Vernon Stoker, the sorting office manager who told us: "We received notification that the people had gone away, and we're now re-directing any mail to Geographic to the returned letter branch at Bradford."

He added: "We don't like to see people twisted. If anyone's worried, they

The reply came - it seems that Dr Watson drew out the money and handed it over to John Gold in cash.

can get a P58 form from any Post Office and return it to any Post Office and it will come to us and go on to the returned letter branch."

So that's what to do if you sent Geographic a letter, perhaps containing a postal order or a cheque that has not yet been cashed.

Village postwoman Ann Edgerton confirmed that all mail for Geographic was now being dealt with by the Post Office rather than by Dr Watson or John Gold and said: "Over 250 letters have been redirected. Instead of delivering them, I now re-address them to the returned letters branch."

Despite his stated intention early in March to inform people when Geographic found new premises, John Gold appears to have taken no steps to ensure his mail follows him. He deserted the Cranfield Place address leaving hundreds of unhappy customers with no effective way of contacting him.

SO WHERE'S THE MONEY?

In our second telephone conversation

with Dr Susan Watson, she said that she never had an address or telephone number for John Gold – apparently, he just turned up from time to time (to use her home telephone to book advertising space, and deal with various aspects of the Geographic business, amongst other things it now transpires).

Although she admitted to processing around £10,000 worth of Geographic cheques through her personal account, during that conversation we omitted to ask her what then happened to the money. So in accordance with the wishes of Howard Kirby (as stated in his letter to us) we telephoned Leeds University's Institute for Transport Studies and asked Kirby to pose that question to Dr Watson on our behalf.

The reply came – it seems that Dr Watson drew out the money and handed it over to John Gold in cash.

There were still a number of unresolved points about the Geographic saga that we wished to clarify with Dr Watson,

Then the Post Office received a hand-written letter signed by a 'Mr Herbert' telling them that Geographic had gone away.

so we asked Howard Kirby if she would telephone us once more.

So far, we have not received that telephone call, nor have we received a response to a letter we sent to Dr Watson raising detailed points about how and when the cash was handed over, whether any of it still remains in her account, how she came to know Mr

Gold, how she contacted him, and why she allowed him to use her home address and telephone to book advertising. We also sought clarification about the confusion surrounding the descriptions of the man known as Mr Gold.

Copies of this letter were sent recorded delivery to Dr Watson at her home address and to her place of work – the Leeds University Institute of Transport Studies. As we went to press, we had not received a reply.

UNANSWERED QUESTIONS

Several questions remain to be answered satisfactorily.

● Why did Dr Susan Watson originally deny any involvement with John Gold and Geographic?
● Why did she then change her story, and admit to doing some 'administrative' work – work which included paying some £10,000-worth of cheques into her personal account and handing the money over in cash, presumably to John Gold?
● Why does Dr Susan Watson's description of John Gold differ so radically from the descriptions of a man who the local postwoman and the staff in the shop on the corner of Cranford Place believe to be John Gold?
● Who, and where is John Gold?

If you can answer any of these questions, or if you know where John Gold is – or indeed, *if you are John Gold* – please call the *Express* hotline 0225 481772 or fax us on 0225 482018.

Express has not yet finished its investigations into this matter - be sure to look out for more details next issue, on sale Thursday May 4 ■

HOW TO AVOID MAIL ORDER MISERY

The experience of Geographic's customers is not universal in the world of mail order. The majority of companies that advertise in computer magazines seek to offer their customers value for money and respect the practices that lead to good trading.

If you are going to buy software that you haven't seen, or read a review of, here are a few pointers to protecting your own interests.
● Look out for reviews. If a product is good enough to pass muster, the publisher will send it to the magazines to review; if it's likely to be slated, review copies will be scarce...
● If possible, pay by credit card as this offers you some degree of protection – in certain circumstances you can claim against the credit card company.
● Never pay by cash – if you don't have a credit card always used a crossed cheque or postal order.
● Don't send money to a company until you've rung them and verified that the program exists and that it does what it says.
● When you ring, ask the name of the person who you speak to and what their job is. Make a note of any claims made for the product.
● Look for previous advertisements. A company that has been advertising for a while is likely to be doing so as the

result of satisfying its customers.
● Ask how long the company has been in existence, and if it is registered as a Limited company – while new companies are usually reputable, disreputable companies don't tend to stay in business...

YOUR RIGHTS

No matter how you buy a product, you can return it if it fails to meet one of the following criteria:
   if it's not of 'merchantable' quality
   if it's not 'as described'
   if it's not 'fit for the purpose for which it was sold'
and you are entitled, by law, to a refund or to compensation for part of the value or to a replacement or to a free repair. (Your local Citizens Advice Bureau or Trading Standards Office (TSO) can explain these criteria more fully.)

When you return something, make sure that you have proof of purchase and that you return it as soon as possible after buying it. Check goods as soon as they are delivered to make sure that everything you ordered is present and that they everything works as it is supposed to.

If you have difficulties, you can always contact your local TSO, or the TSO that has responsibility for the area in which the supplying company is located – which is the

● *Mr Attenborough, of the West Yorkshire Trading Standards Office - just one of the many people who would like to speeak to the elusive John Gold.*

West Yorkshire Trading Standards Office in the case of Geographic.

We talked to Mr Attenborough, spokesman for West Yorkshire TSO who said: "We have had several complaints about Geographic from the public and from other Trading Standards Offices that have been contacted by customers of Geographic." He confirmed that he was actively investigating Geographic – we will pass the *Express* files to him in due course. Disgruntled Geographic customers can reach West Yorkshire TSO on 0532 536111, but remember to be polite – don't forget, it's not their fault!

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It's ideal for artists.

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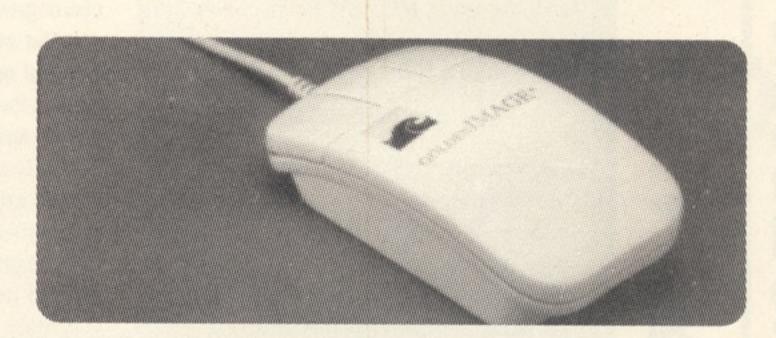
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TOMORROW'S

If we consider for a moment why we need keyboards to operate our computers we soon realise it's simply because there's no other means of inputting commands. While this may sound ridiculous it's only because we automatically assume it to be the case. Granted, typing documents may be a little difficult without a substuitute for a typewriter but with the emergence of the Graphical User Interface as the de facto standard front end - from Windows 3 and Ensemble to Macintosh System 7 and NeXT Step - the means of controlling our machines has radically altered.

We no longer need the Command Line Interface. For everyday file management all that is required is a pointing device which can be clicked to move, copy, delete and launch applications and documents. To an extent a mouse already provides this function extremely well. Other devices like trackerballs and pressure-sensitive pads also deliver the goods, perhaps somewhat less effectively.

But the real advance – to pen and voice input systems is only now becoming practicable. One could argue it's inevitable. As computers have become more and more pervasive, infiltrating all areas of commerce and leisure, computer literacy has been constrained by the dreaded Command Line. Windows, Icons, Mice and Pointers may have

• Atari's entry into the pen input portable arena is the ST Pad. Whereas the GriDPad costs some £2500, Atari's smart little beauty has a projected price point of around £700. Whether its GEM style interface and handwriting translation abilies are as good as the former remains to be seen - it won't be available until next year.

made the technofear a little easier to cope with, but what the great mass out there really wants is something they can talk to. And while they're waiting for this to arrive they'll put up with pen input. Moreover, it makes sense from the manufacturers end too, doesn't it? More units will sell if you don't need the equivalent of a degree to operate the damn things.

But even more far sighted, both from the point of view of developers and marketing men, is the notion that true portability depends on the death of the keyboard. Design can then offer just a pocket sized screen which can be directly written to using a stylus not too dissimilar from a Stylograph pen. Then, so the thinking goes, everyone will want one and we'll all lead much more efficient lives thank you very much.

HOW TO POINT A PEN

Certainly this is the thinking behind the ST Pad and GridPad. Both these tablet-like devices operate more like notebooks than computers, being designed to replace the kind of clipboard touted by market researchers. For although the ST Pad, previewed in *Express* 124, is still at a prototype stage as far as its applications are concerned, we can expect a modified GEM style interface. Whereas with the GridPad, reviewed in *Express* 122, customised applications with hand-writing recognition algorithms preserve the user from a traditional MS-DOS command line. But for a true pen-

input portable, incorporating a radically different interface we have to look at the kind of front-end offered by the GO machine. With its

"What they really want is something they can talk to. And while they're waiting they'll put up with pen input"

PenPoint interface, a rendition of which surrounds this article, the design metaphor is actually more that of the Filofax than the notebook.

PenPoint is a 32-bit object-oriented, multi-tasking Operating System designed specifically to be driven by a pen and incorporating two features hitherto absent from other Graphical User Interfaces.

The first is the Notebook User Interface. The easiest way to think of this is just as the pages of a diary or jotting pad. Notes are always live text in so far as they can be added to and annotated at any time and in any way the writer wishes. The only difference is the physical nature of the screen and paper – the former scrolls where the latter would need to be turned.

With the NUI, a user can flip between pages and always return to the point at which the page was last visited. The notion of opening a document, scrolling to the end, adding some more data and saving it, is out of place here. It's now an anachronism. With the current state-of-the-art you simply have hundreds or thousands of pages which appear to be running simultaneously. An automatically generated contents page precedes the pages

PROBLEMS WITH THE WAY YOU WRITE?

A typical handwriting recognition system can occupy as little as 100K of code and process about three characters a second. But the success of the system depends on a large number of variables, each of which have to be 'learnt'.

Any handwriting translation (H W X) system also requires a spelling dictionary and the ability to distinguish between characters that overlap and touch, are of mixed size and case and include numbers and punctuation. Any system requires some familiarisation with the person using it. Accuracy rates of over 90 per cent are not uncommon but four out of five words is the average.

Neural networking would be the ideal answer to this process, as the neurons would learn a users handwriting perfectly, learning from mistakes as it made them. Current systems though have no such sophistication. However long you use them, they will still make the same mistake - you rather than the program must change your handwriting to suit them if you wish to increase the accuracy rate. This is because HWXs have to compare written word shapes with stored templates or prototypes. GO's PenPoint system is innovative in this respect though - it does at least allow you to build a number of your own prototypes.

HOW DOES PEN INPUT WORK?

A stylus, lightpen , or finger for that matter, interacts with either a pressure-sensitive, electromagnetic or laser grid generated across the surface of a screen which enables the operating system to detect its position and whether it's making contact.

TOUCH AND GO

Does the appearance of a new breed of machines like the ST Pad, the GridPad, the Go! and the Active Book, mean we can consign the keyboard to the wastebasket forever? *Express puts its finger on touch screen technology and beyond...*

grouped under any subject area and you can create sections of groups of pages that can act as chapters. These reside as page labels on the edge of the display which can be 'touched' to be activated. In this sense the data is being organised along the lines of files within folders, except that rather than opening a new document into an application, one merely has to turn a page to affect the same function. In addition, frequently used notebooks can be put in a bookshelf area to be taken off and opened as desired. One Megabyte of RAM can hold around 100 pages of mixed text and graphics data.

GESTURING AT YOUR SCREEN

The other innovative feature about the PenPoint front end is the Gesture function. While the GO's pen is used as both a pointing device and a handwriting device, it is also incorporated as an action tool. In this way regularly used file management operations are handled by denoting common symbols. For instance, a '0' is used to indicate Edit, a 3 is used to select from an option menu, an 'L' indicates a space to be inserted. Deleting a word, for instance, is simply a question of drawing a cross through it. A word can be made bold merely by drawing a 'B' over it. In this way, a user is able to annotate files and text with a dozen or so gestures allowing you to also select, drag, scroll and adjust text and file attributes.
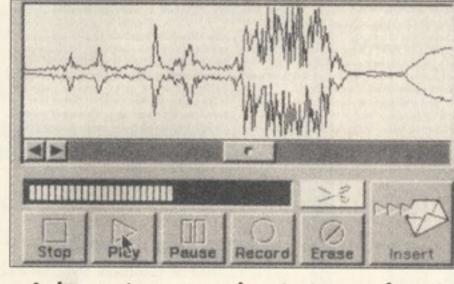
BEYOND TAPPING AND POINTING

Doubtless the keyboard has transformed computing, but it is still an unnatural interface. What's more its functionality depends on it being big enough for fingers to connect with. As such the size of the notebook computer is restricted by the relatively large size of its keyboard. Poqet's PC and Atari's Portfolio are generally regarded as being about small as

• At least voice systems do exist in some form. Lip Service, running on the NeXT, allows users to annotate documents with spoken comments that can be replayed on loading. But actual speech recognition in realtime requires tremendous processing power and will ultimately require neural network technology for accurate understanding.

you can go before being unusable. While mice, styluses and trackerballs et al are slowly replacing the keyboard as a means of task management, it still remains the only viable means of large scale text entry.

In the future, voice recognition will come to the fore as processor speeds offer speeds of the required 100 MIPs. But the race is on for the first systems and already research companies are begining to market solutions which claim to recognise 25,000 words. Again though, recognition is still a bit of a hit and miss affair. Neural techonlogy will eventually find its way into the personal organisers of tomorrow. ∎

TOMORROW'S TECH SPECS

GRID'S GRIDPAD

Size:	11 inches x 8.5 inches
Input device:	stylus attached by lead
Processor:	10MHz 80C86
RAM:	1Mb as standard
Storage:	2 x 1Mb flash memory cards, hard disk optional
Peripherals:	built in modem, fax modem, networking

GO'S PENPOINT

Size:	8.5 inches x 5.5 inches
Input device:	Cordless stylus
Processor:	16MHz 286 or 386SX
RAM:	At least 4Mb
Storage:	Either 2.5 inch, 3.5 inch hard disk or flash memory cards
Peripherals:	Modems, fax modems, networking
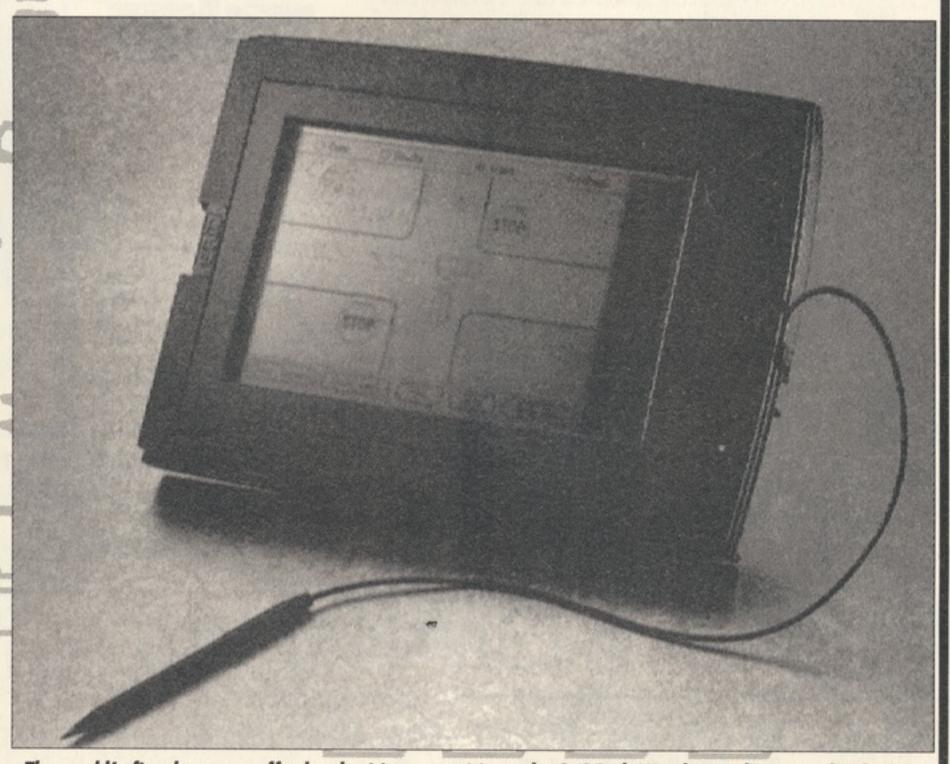
ATARI'S ST PAD

Size:	11 inches by 8.5 inches
Input device:	Stylus attached by lead
Processor:	7.5 MHz 68000
RAM:	1Mb as standard
Storage:	Flash memory cards and connection to ST disk drives
Peripherals:	All ST add-ons and expansions
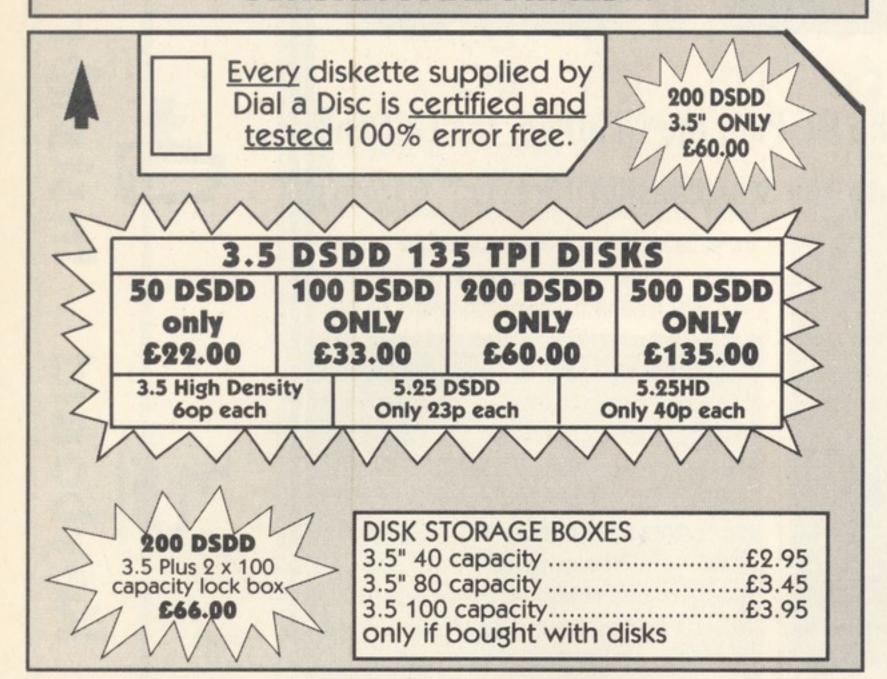
• The world's first laptop to offer handwriting recognition - the GriDPad. Weighing only 4 pounds, this innovative machine runs on RAM cards and features MS-DOS compatibility. Tandy owned GriD plan to introduce both colour and A5 versions later this year.

ON THE NEAR HORIZON

The Active Book
We're still waiting for ex Acorn founder Herman Hauser's Active Book although when it arrives later this year, we can expect it to include hand-writing recognition, voice recording, picture recording, direct e-mail and fax link up. Based around the ARM chip to be found in the Archimedes, the Active Book uses a notebook system of organisation similar to that found in GO's PenPoint.

→] In
Installer
Keyboard
Disks
Stationery
Tools
Preferences

• The image surrounding this article is similar to that being employed in the new family of notebook computers due from GO later this year. Based on a

TAKE A FIRST STEP TOWARDS £5,000

Commodore's First Steps software bundle is the prize on offer this week in the biggest ever *Express* software giveaway competition.

So you've already got an Amiga, but you don't want to miss the chance of Commodore's premier educational bundle. *First Steps* is the latest offering in Commodore's Class of the 90s series.

Aimed at just about everyone from toddler to pensioner, *First Steps* is an integrated software bundle designed to offer a learning package that takes in productivity, applications and leisure.

Included in the pack is an emulator which allows the Amiga to run BBC educational software. Although this must be a waste of the Amiga's potential, it allows access to the thousands of programs already at use in schools.

There's Logo too, a graphic and list processing language that uses a turtle to teach drawing on the screen. This version can talk too, allowing it to interact with the user.

Music mouse is a program that allows musician and novice alike to produce complex musical arangements using either the Amiga's internal sounds, samples or a full MIDI orchestra if you fit a MIDI interface and connect it to modules.

Putting prose to paper is handled by word processor *Pro Write*, with features like multiple font sizes and multi-tasking.

Infofile is a database that comes with templates for many often used methods of storing data including accounts, phone book, addresses, etc.

Artistic ability is catered for with *Deluxe Paint II* and output to a printer can be enhanced by *Deluxe Print II*

Finally, a couple of tutoring packages offer a more structured approach to the educational side of *First Steps* and the package follows the requirements of the National Curriculum.

We're giving away thousands of pounds worth of *First Steps* over the next few months and to win this week's *First Steps* bundle (worth £500 plus) all you have to do is answer the following questions and complete the tiebreaker. Send your entry on the back of a postcard or envelope to: The *Express* First Steps Compo, 29 Monmouth Street, Bath BA1 2BW to arrive no later than May 4 1991.

1) In the days of steam trains a word processor was called
a) A secretary
b) A typewriter
c) A dictaphone
d) A teleprinter

2) What computer language teaches us about shapes and list processing using a turtle as a cursor?
a) Venezualan
b) Pascal
c) Basic
d) LOGO

3) What peripheral could you use with *Music Mouse*?
a) A trap
b) MIDI keyboards
c) Cheddar Cheese
d) Video Toaster

4) What company is there a little of in all of us?
a) Hollands Pies and Puddings
b) The Audit Commission
c) Frank Yonco and the Everglades
d) Commodore

Complete the following in a humorous manner in no more than 12 words:

The bit of Commodore in me is ....

COMING NEXT THURSDAY

King of the WIMPs
Which front-end is the best? - and how could yours be improved?

Canon's Ion
Is this the perfect camera for use with computers?

The world's most powerful notebook
A RISC-based sensation exclusively previewed

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AND
WIN a complete laptop system worth £500!!!